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PACIFIC *Pulp & Paper* INDUSTRY

AUGUST 1942

Vol. 16 • No. 2



# C O L O R

*serves on another front*

The paper industry is confronted with the need of replacing critical materials with paper products. It may be necessary to shift to selective production of paper products for the most essential uses. This requires planning for adequate supplies of pulp, paper and paper products both for direct war use and essential civilian needs. This program must be carried out despite restrictions in the use of critical materials and the accompanying need for conservation.

Many of these products will carry color for efficiency and safety. Dyes will be used for standardizing, tinting and identifying paper products for the armed forces—for all essential communications.

To best utilize available dyestuffs for the many paper products required is a job for du Pont dyestuff technicians. The services of our specially trained sales and technical staff are at your disposal to help solve the many dyeing problems which are certain to occur.

**E. I. DU PONT DE NEMOURS & COMPANY, (INC.)**  
Organic Chemicals Department, Dyestuffs Division  
Wilmington, Delaware





*The Journal of the  
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## Talk Shifting Mill Employees to War Plants

At meeting with WPB industry hears war plants in Puget Sound area may need 60,000 additional men before end of year. That shortage of steel may obviate need for early shift indicated by Maritime Commission's reduction by 20,000 men of the total to be employed in three Portland shipyards. Analysis of raw material and manpower situation in Pacific Northwest.

IN the summary issued July 20th of the meeting on July 13 and 14th of the Pulp and Paper Branch of the War Production Board with its Industry Advisory Committee, the shortage of labor in the Puget Sound area was briefly touched upon. No percentages of curtailment are mentioned in the summary as none have been definitely determined at this writing by the War Manpower Commission and the Labor Division of the WPB. Whether curtailment in the region is advisable now or in the near future and if so how far it should go, are matters subject to further analysis and discussion. We quote the WPB's summary of the meeting:

"The Industry Advisory Committee of the Pulp and Paper Industry met with the Pulp and Paper Branch and representatives of other war agencies in Washington on July 13 and 14, 1942. Five changes have been made in the personnel of the Committee in accordance with the policy of replacing five members of the committee every three months.

"The meeting opened with an explanation of the realignment of the War Production Board and its agencies. In the new organization, overall policy and programs of activity will be checked by a new division set up specifically for the purpose. This will result in a more even and accelerated conversion program. The realignment places more power in the industry branches.

"In connection with the realignment, the Pulp and Paper Section of the Special Industrial Machinery Branch has been transferred to the Pulp and Paper Branch. Mr. John C. Hanchett, Senior Industrial Specialist in the former section together with his assistants has been transferred to the Operating and Service Section where he will assist Mr. James L. Ritchie in handling priorities.

"Mr. Robert R. Nathan, Chairman of the Planning Committee of the War Production Board, stated that American industry is just beginning to enter the war production stage. Of the \$225,000,000,000 which have been appropriated for war purposes, only \$40,000,000,000 have been expended, half of which has been for actual shooting and fighting equipment. Mr. Nathan said that the best estimates indicate that the German war machine cost approximately \$100,000,000,000 on the basis of American values.

"Mr. Nathan pointed out that up to the present time much of the production for war purposes has come from excess industrial capacity and from unemployed labor. Now requirements will call for deeper and deeper cuts into production for civilian purposes. He stated significantly that to win the war the civilian economy will have to be scaled to a very thin level.

#### Labor Conditions In the Puget Sound Area

● "Mr. Richard A. Lester, Labor Division, War Production Board, discussed the economic situation in the Puget Sound Area, which underlies the production of woodpulp and lumber in that region. Mr. Lester said that plans already underway for the construction of ships, tanks and other war equipment will require some additional 60,000 workers before the end of the year. He indicated that these new labor demands, coming on top of others which draw labor from the region, particularly the construction of the Alaskan Highway, has depleted the labor supply available for industrial operations. The logging industry has been seriously affected. He added also that the shifting of labor into the war industries has created a serious shortage east of the Rockies in the mining of copper, lead and other non-ferrous metals.

"Mr. Lester emphasized the possibility of serious curtailment of local industrial activities to obtain necessary additional war labor. Shifting of labor into the region from other regions is handicapped by the lack of housing and community services. He indicated that plans are under consideration for handling this problem upon a systematic basis.

"In subsequent discussion, the effect of this situation upon the manufacture of pulp and paper was carefully considered, particularly with reference to the critical situation in lumber supply. The bottleneck is in the production of logs for sawmills and pulp mills and this is chiefly a question of adequate labor supply. The pulp mills in the region need about one billion feet of logs annually. This footage does not appear to be available.

#### Woodpulp Inventories

"In a brief summarization of the woodpulp situation, it was pointed out that inventories at consuming mills are increasing at the present time. The necessity for increasing inventories while pulp and transportation are available is emphasized by the difficulties which the Pacific Northwest mills are facing in obtaining pulp wood, a situation which may be expected to arise in other regions from time to time.

#### Elimination of Cross-Hauling of Woodpulp

"An important means of relieving pressure upon transportation is the elimination of cross-hauling wherever possible. The report of a study of cross-hauling in woodpulp shows that in May some 468,000 car miles could have been saved if cross-hauling could have been eliminated. Task groups from the Allocation Committee and from the Transportation



Committee have made intensive studies of cross-hauling and their reports to the Branch are being used as the basis for reducing cross-hauling.

"Questionnaires sent to all consumers of woodpulp indicated that half of those who reported are now obtaining woodpulp without cross-haul and that the other half could obtain up to an average of 70 per cent of requirements without cross-haul.

"It was reported also, 1,000 cars less were used in moving woodpulp in June, 1942, than in the same month of 1941, because of the heavier loading and more efficient use of transportation facilities.

"In commenting upon their studies of cross-hauling in woodpulp, the task committees recommended similar studies for other fibrous materials and for finished products. This may be done in the case of waste paper. With respect to finished products, however, it is reported that the Office of Defense Transportation feels that the elimination of cross-hauling in materials may relieve enough transportation to make unnecessary similar programs in finished products.

#### New Uses and Substitutions

"The plans of the Branch for stimulating the production of new products and of substitute products for war and essential purposes were discussed at length. A task committee composed of members of the Industry Advisory Committee was appointed to consider ways and means. This is deemed one of the more important immediate projects of the Branch. The cooperation of the armed services was assured by General Baker, the liaison officer between the War Production Board and the armed services.

#### Compliance

"Results of compliance surveys made with respect to the brightness ceilings established in L-11 indicate that of 17 fully documented cases only five were found in non-compliance. Appropriate action is being taken in these cases, and the survey is proceeding on a broad scale.

#### Simplification

"The provisions of the simplification order which goes into effect on July 24 were explained and discussed. Certain suggestions were made with respect to interpretations and amendments which would clarify meaning. Suggestions were also made with respect to compliance action with this order. It was stated definitely by the Branch that every effort will be made to secure compliance and that personnel are being obtained for that purpose."

#### Manpower and Raw Materials

● The statement made by Mr. Lester that 60,000 additional men will be needed in Puget Sound war industries before the end of the year, is, of course, an estimate. The development of this anticipated demand for labor depends upon the availability of raw materials, primarily of steel. The supply is very short at the moment even for shipbuilding which last month shared the highest priority rating with Lend-Lease. Whether enough additional steel tonnage will become available to supply new shipbuilding and other war production facilities

by the end of the year or even by mid-1943, is a question upon which experts do not agree.

Men connected with steel using industries in the Pacific Northwest state emphatically that enough additional steel will not be available in the remaining five months of the year to enable new shipbuilding facilities to be operated at or close to capacity.

This viewpoint is supported by an Associated Press report of August 5th from Portland, which said, "The Maritime Commission will limit shipyard employment in Portland and Vancouver, Washington, E. F. Slade advised the Portland Citizen's Committee today.

"Slade, representing the committee in Washington, D. C., said in a telegram that earlier estimates of the number of workers had been reduced 20,000, and that employment in the three Kaiser shipyards would be limited to 83,000.

"Slade also said the commission had authorized construction of only 6,000 of the 38,000 housing units requested by the committee. The commission said it would consider additional houses only after the 6,000 were rented, Slade said."

The steel shortage is obviously the principal factor in the commission's decision to limit shipyard employment below the capacity of existing plants. One of the causes of the steel shortage is the ability of American industry to produce war equipment with far greater speed than had been anticipated. Two examples illustrate this point. The Kaiser organization guaranteed to produce a cargo ship every 105 days but has succeeded in turning one out every 48 days. The Chrysler tank plant is producing 2½ times more tanks in a specified time than the original contract called for. Raw material consumption is way ahead of productive capacity.

The raw material situation indicates, then, that caution should be exercised in reaching any decision to curtail civilian industries in the Pacific Northwest by government edict. Premature curtailment, upsetting the region's economy, would be detrimental to our war effort in several ways. If the materials are not available to absorb manpower in the making of ships, tanks, planes and other implements of war, curtailment of civilian industries would result in unemployment, severe hardships, and a big loss to the government in corporation and personal income taxes along with a drastic decline in War Bond buying power.

The pulp and paper industry occupies a position of increasing importance in the region's economy, especially in Washington where the industry's wage payments last year amounted to \$17,236,948 as compared with \$4,855,526 in 1927. These figures fail to reflect the industry's full contribution for its purchases of raw materials and supplies are so large in proportion to its direct payroll that thousands of other people are supported indirectly.

In their zeal to speed our war production some men have been working on the theory that any curtailment of civilian industries is automatically helpful to the war effort. David Winton, chief of the Pulp and Paper Branch of the War Production Board, recognized this fallacious reasoning at a meeting in Chicago, July 3rd, when he said, "There will be no curtailment for the hell of it."

If and when there is actual need for further curtailment in Pacific Northwest production (aside from that already caused by declining business), it must be selective rather than horizontal if it is to help not hinder the War Program. A number of the pulp, paper and paperboard industry's products are of primary importance to the prosecution of the war and either cannot be produced elsewhere on the continent without long delay and the use of large quantities of scarce metals to build new facilities, or cannot be transferred elsewhere without adding to the traffic problems of the railroads, for much of the output of Pacific Coast mills is now being consumed by war industries along the shores of the Pacific Ocean.

A hasty attempt to alleviate an estimated increased shortage of manpower could easily result in a serious shortage of war materials and the net gain would be naught.

Why is labor supply a problem in the Pacific Northwest? In the first place the production of ships, planes, lumber, wood pulp, and paper and other items essential to the war is greater in proportion to the population than in other regions of the country. Then, too, a larger proportion of the population is already engaged in war industries than in any other area. The inflexibility of the draft quotas is another important factor. So far the selective service headquarters in Washington, D. C., has applied the same formula to set quotas from the Pacific Northwest as from regions where war industry labor requirements have not



been so heavy.

Recognizing this problem the draft boards of the Seattle area have lately joined in writing letters to the state selective service director for transmittal to Washington, D. C., asking that the labor shortage be recognized by a reduction in the quotas, at least until other regions have exhausted their 1-A classifications and begin taking married men without and with children. Some Seattle boards, finding their lists of single men will be exhausted relatively soon, due in part to necessary deferments for war work, are drafting some married men with children. This is being done despite the promise of selective service officials, under pressure from Congress, that a uniform system of drafting by classifications would be applied and that married men with children would be the last class to be called. This problem is equally acute in the Columbia River area.

### Six Month's Pulp Production At Record Level

● United States pulp production, which has set an unbroken succession of records beginning with 1939, now appears headed for a new all-time record in 1942, according to Ossian Anderson, president, Puget Sound Pulp & Timber Company.

Domestic output of all grades of wood pulp combined, amounting to 5,469,000 tons in the first six months of 1942, constituted a gain of 12.3 per cent over output for the comparable months of 1941, Mr. Anderson stated. Output of all chemical grades, at 4,454,000 tons for the six months, was 13.8 per cent ahead of last year; production of 1,015,000 tons of mechanical pulps represented a 6.1 per cent increase.

"Most notable percentage gain in 1942 to date has been accomplished in the manufacture of unbleached sulphite pulp," Mr. Anderson declared. "Six months' output of 673,000 tons created an increase of 118,000 tons, or 21.3 per cent over the comparable 1941 period.

"One year ago," Mr. Anderson recalled, "the threat of pulp shortage caused grave concern. Through the combined efforts of the American industry this threat has been removed. Record demand is being satisfied."

### Columbia River Stops A Week for Repairs

● Columbia River Paper Mills, Vancouver, Washington, was shut down the week of August 2nd. At that time extensive repairs were made in the mill, while several of the men of the plant took their vacations.

### Priorities

● Question: What is a priority?

Answer: A priority is the right to be the first to ask for something you know you'll never get.—Pioneer-Flintkote "Top-notch."

## Everett Pulp & Paper Elects New Officers

● Almost 40 years to the day after he began working for the Everett Pulp and Paper Company in August, 1902, W. J. Pilz was elected president and general manager of the large book and writing paper mill at Lowell, a suburb of Everett. Mr. Pilz recalled his start with the company as an office boy as he announced on July 27th the election of officers occasioned by the recent death of A. H. Jordan who served many years as president and treasurer.

Anson B. Moody, who has been with the company since 1927, was elected vice president and assistant general manager. G. A. Blomberg was elected secretary and assistant treasurer. He will continue as office manager, a position he has held for some years. Mr. Blomberg joined the Everett organization in 1917.

Trustees elected are: Mr. Pilz, Mr. Moody, Mrs. Ada Pilz, Mrs. Ellen Moody, Mrs. Lillian Meadowcroft, J. A. Coleman and W. M. Jenkins, president of the Everett Trust & Savings Bank, executor of the late Mr. Jordan's estate.

In his announcement Mr. Pilz stated that there will be no change in the policies of the Everett Pulp & Paper Company under which it has operated successfully the past 50 years.



**W. J. PILZ, President and General Manager, Everett Pulp & Paper Co.**

### Long Named Fir-Tex Production Manager

● J. G. Long, in charge of technical control department, Fir-Tex Insulating Board Company, St. Helens, Oregon, took on added duties at the plant in mid-July when he became manager of production. Besides heading the technical control department he now has charge of programming at the mill, supervising the speed of operation, according to R. W. Simeral, general manager.



**G. A. BLOMBERG, Secretary and Assistant Treasurer, Everett Pulp & Paper Co.**



**ANSON B. MOODY, Vice President and Assistant General Manager, Everett Pulp & Paper Co.**

## Promotions at Fibreboard Vernon Plant Announced

**Frank H. Wheelock named Board Mill Manager; George E. Eberhard, Board Mill Superintendent; Frank Crotchett, E. R. Switzer and Arthur Dahl, Night Superintendents.**

● Promotions at the Vernon Division mill of Fibreboard Products Inc., Los Angeles, have recently been announced by Bruce F. Brown, division manager. Since the sudden passing of U. Grant Farmer on July 1st, for many years board mill superintendent, the following changes have been made.

Frank H. Wheelock has been advanced to the position of board mill manager. Since 1931 Mr. Wheelock has served the Vernon Division as chief chemist and assistant superintendent. A native of Tennessee, Mr. Wheelock received his chemical engineering training at the Georgia Institute of Technology. He left college to join the Army during the first World War. Upon his discharge he became a chemist for the Semet Solvay Byproducts Coke Co., and later went to work for a printing ink manufacturer selling inks. This work brought him in contact with the printing of shipping cases and cartons and resulted in his becoming associated with the O. B. Andrews Company of Chattanooga, Tennessee, manufacturers of paperboard, solid and corrugated shipping cases and cartons.

In February, 1930, Mr. Wheelock came to Los Angeles and immediately went to work for Fibreboard

Products Inc., on the order desk. When a vacancy occurred in the laboratory in December, 1931, he was assigned to supervise the plant's technical problems. From 1931 until 1942 he served as chief chemist and assistant superintendent.

The position of board mill superintendent has been assigned to George E. Eberhard who was day shift foreman and assistant superintendent in charge of production under Mr. Farmer. Mr. Eberhard started work in a paper mill at Mt. Vernon, Indiana, in 1914 where he worked until June, 1916, when he enlisted in the Army. He served throughout the war and saw service in France where he became a sergeant. In 1919 he returned to the paper mill at Mt. Vernon but moved the next year to Hutchinson, Kansas, where he continued to follow his trade of paper maker. In 1922 he came to California and has worked for Fibreboard Products Inc., continuously, advancing through various positions from cutter tender to superintendent.

Assisting Mr. Wheelock and Mr. Eberhard as night superintendents are Frank Crotchett, E. R. Switzer and Arthur Dahl all of whom have had wide experience in the manufacture of paperboard.



**FRANK H. WHEELOCK, Board Mill Manager, Fibreboard at Vernon.**



**GEORGE E. EBERHARD, Board Mill Superintendent, Fibreboard at Vernon.**

### Mr. Calder Comments Upon Paper Situation

● Alexander Calder, president of the Union Bag & Paper Corporation, makes the following comment on the paper and waste paper situation:

"Much publicity and public interest has been given to the campaign for the collection of waste paper. The response to this campaign has been spontaneous, and the co-operation of the public has been so whole-hearted that the threatened shortage has actually turned into a substantial surplus.

"Unfortunately, this drive to collect waste paper has been quite logically but erroneously confused with the situation affecting new paper, and the appeal to save waste paper has been generally interpreted to indicate a necessity for curtailing the use of all new paper and paper products. Waste paper provides material which is reworked into certain grades (chiefly paper boards) which are needed in our war effort.

"With typical patriotic fervor and as a result of a misinterpretation of what was actually needed in the way of paper, the general public has been denying itself even such necessary paper items as writing paper, paper towels, grocery bags, etc. People have had the feeling that any time they used paper in any form they were taking it away from bullets. In actual fact, the only shortages that have existed were the result of abnormal buying on the part of some people who were afraid of being affected by a nationwide paper shortage.

"So far as the future is concerned, there is no immediate indication that a shortage of pulp will cause a shortage of bags and paper. However, there are other factors which may create a shortage later. For instance, there may be a shortage of freight cars which carry bags and paper to destinations. Trucks are used to haul wood to paper mills, and the shortage of tires will naturally affect this situation.

"A shortage of labor may be experienced as the largest army in history is mobilized. The curtailment of vital materials necessary to the manufacture of paper may affect production at a later date. It is not advisable to reason that there will be an abundance of paper products simply because there is no shortage today. We are at war—and the future of any product or business is unpredictable.

"This is not one man's opinion. You have undoubtedly read public statements on the paper situation recently. We quote from an article in Time Magazine:

"When the public heard there was a shortage of old paper, it logically but erroneously decided that there was a shortage of new paper, too. This started a shortage scare which led to a lot of over-buying and actually created a temporary false shortage in many grades."

## Sorg's Port Mellon Program Nearly Done

● The Sorg Pulp Company's extension program designed to increase production at its Port Mellon plant on Howe Sound, British Columbia, and place the whole plant on a more favorable operating basis, is virtually completed, according to the company's Vancouver office.

Original plans called for the expenditure of some \$1,000,000 and gradually stepping up production. The mill is now producing about 100 tons of kraft daily, and in a few weeks will probably have an output of 120 tons.

Dominion Construction Company had the main contract for the improvements at Port Mellon. The Grinnell Company of Canada, C. C. Moore & Company and Blaine Boiler Works, all of Vancouver, assisted in the program.

Extension of the old machine room with an addition 100 feet long and 52 feet wide was a part of the job. A new machine room 260 by 44 feet was also built.

A new drying machine, with adjoining lean-to to house the turbine to drive the drying machine and accommodate a new drill store, were also constructed.

Erection of new electrical, machine and blacksmith shops was also a part of the job, together with a new recovery room which doubles the capacity of the recovery department.

Installation of a pressure water filter plant consisting of seven steel filter tanks and a 60,000-gallon wash-water tank of Douglas fir construction was also carried out.

Additional features included a new lime recovery installation, addition to the wood room and revamping of the hog fuel storage and handling facilities.

Many of the new buildings are of timber construction, the lumber for their extension being provided by the company's own sawmill, so far cutting to meet only its own requirements.

## Fir-Tex Employing Women In Plant

● Fir-Tex Insulating Board Company, St. Helens, Oregon, is to hire women workers for the first time in the mill's history, according to R. W. Simeral, general manager. The current labor shortage caused by departure of men for the armed forces or for employment in war industries is given as the reason for the company's action. At present there are about twelve jobs open to women in the plant, principally in the finishing room. From the applications received at the Fir-Tex office it is evident that there are plenty of women ready and willing to take jobs in the plant.

If the new "hands" can maintain the pace set by their male predecessors, they'll be paid the same stipend that went to the men workers, Simeral declared. However, if it is necessary to lighten the tasks to which the women will be assigned it will likewise be necessary to reduce their pay, probably to the \$5.80 per day wage being paid such women as are employed on what is considered primarily as women's work in other local industries.

Present scale for common labor at the Fir-Tex plant is 82½ cents an hour, which is \$6.80 per day. Skilled workers get higher scales, but the initial crew of women employees will apparently all be used on unskilled jobs, so will receive the common labor scale, provided that they are able to handle the work.

## Nunn Appointed Technical Supervisor at West Linn

● E. H. Nunn became technical supervisor of Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, West Linn, Oregon, on June 1st, when Clarence A. Enghouse, former technical director became assistant to the resident manager.

Mr. Nunn is a graduate of University of British Columbia, where he majored in chemical engineering, receiving a B.A.Sc. degree in 1927. During the following year he taught chemistry at the University before making an entry into the pulp and paper field as chemical engineer of British Columbia Pulp and Paper Company, Limited, at Port Alice and Woodfibre, B. C. Nunn remained with the company until 1930, when he came to West Linn as a chemist. A few months later he became a research chemist at Camas, Washington, a position he held until 1938. During the last three years on this job he worked on waxed paper, serving the three Western Waxed Paper Company plants in Los Angeles, Oakland and Portland.

In 1938 Mr. Nunn became assistant superintendent of Western Waxed Paper Company, Division of Crown Zellerbach Corporation, at Oakland, California. He continued in this capacity until recently returning to West Linn and becoming technical supervisor.

Mr. Nunn was active in Crown Willamette Paper School, having been co-editor of the school's textbook "Making Paper" and he also served as professor of the fourth year class while at Camas.

Mr. and Mrs. Nunn and their three children reside in Oregon City.



E. H. NUNN, Technical Supervisor, Crown Willamette Paper Co., Div. of Crown Zellerbach Corp., West Linn, Ore.

## Another Argument for Paper Milk Bottles

● "Broken Milk Bottles Delay War Workers," was the headline of a front page story in the Seattle Times for August 4th. Quoting the short story:

"Traffic in Spokane Street, main arterial to the shipbuilding industries on Harbor Island, was thrown into a turmoil by 140 broken bottles of milk right in the middle of the rush hour at 7:25 o'clock this morning.

"A milk truck making the turn from Spokane Street to 11th Avenue Southwest, lost part of its load. The bottles smashed in the middle of the street.

"The rubber supply being what it is, motorists refused to 'navigate' the hazardous thoroughfare.

"Traffic was rerouted around the spot for 30 minutes while a disgruntled milk-truck operator swept up the 'mess'."

If those bottles had been of paperboard our shipbuilding program would not have been delayed. This is the first example we have heard of where broken glass milk bottles have delayed war work. We have all heard of injuries to children running home from the grocery with a glass milk bottle.

The milk truck mentioned was probably overloaded. Had the load been packaged in paperboard, the same amount of milk could have been carried in smaller space. Today with rubber so precious and gas scarce in many localities, the paper milk bottle is answer to the problem, for it permits carrying more milk on a single trip.

## Olympic Peninsula Mills Cooperating in Salvage Drive

● Pulp and paper industry units on the Olympic Peninsula of Washington are cooperating fully with the War Production Board's salvage program, reports H. L. Day of Crown Zellerbach Corporation at Port Angeles, chairman of the Peninsula industrial salvage committee.

Serving on the committee with Mr. Day are H. A. Sprague, Port Angeles Division of Rayonier Incorporated; T. B. Hargreaves, Crown Zellerbach Corporation, Port Angeles; A. F. Benson, Fibreboard Products Inc., Port Angeles; H. J. Goodrich, superintendent of Crown Zellerbach logging operations at Neah Bay, and representatives of other major industries in the area.



## Method for Replacing Damaged Minton Dryer Roll Head

by CARL G. RIES\*

THE following is a brief description of the method recently used in the Everett Mill of the Pulp Division, Weyerhaeuser Timber Company, to change a cracked Minton Dryer roll head. The manner in which this was accomplished is being described for publication in the hope that it may help others in the industry.

Removal of the dryer frame side plate with its metal to metal fit and its replacement presented a problem. Jacking clamps were made as shown, the total number of which would give a force of close to fifty tons evenly at the face of the frame flange joints and together with a recessed bar to even the strain on the segments over the bolt holes, ample pressure of the jacking screw could be applied.

Prior to the machine being shut down, alternate bolts were removed, penetrating oil used and the bolt holes corked on each side.

Following the machine shut down, all bolts were removed, the dryer roll supported and the dryer vacuum pump was operated continuously to obtain as much cooling as possible of the frame by the air passing through the frame manhole plate and the felt roll bearing cover plates.

The material in the dryer frame was of semi-steel and a coefficient of expansion of .00000600 was used in calculating the shrinkage obtainable. Obviously it was desirable to accomplish the job with the balance of the dryer hot, so that any cooling of an individual section would give the desired clearance for replacement. Felt rolls were not removed, but supported in place by brackets or blocking. On removing the side plate frame, it was placed outside the machine room while being cleaned for normal air cooling.

Replacement of the cracked head presented no problem. However, measurements indicated that some growth of the dryer roll cast iron head had occurred giving excessive clearance and requiring the centering of the head before tightening. After replacing the cracked head, the temperature of the machine

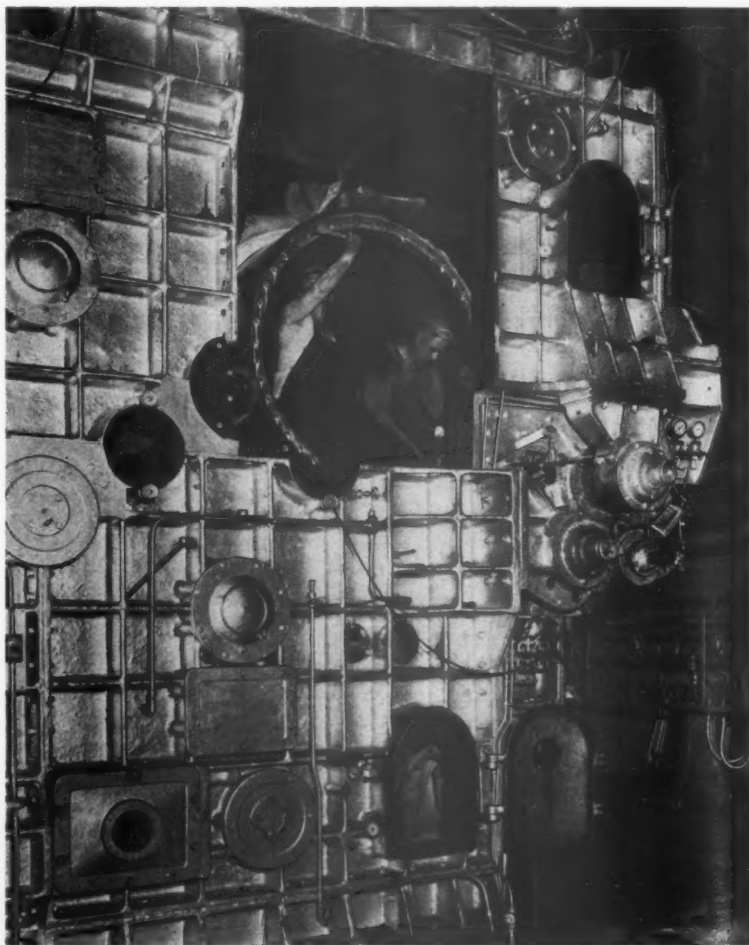
frame and the removed side plate frame was checked and found to have approximately 40° F. difference. The frame being 82"x70" and using the .00000600 coefficient, a clearance of .0197 and .0168 was available. This allowed the side plate to be replaced without reversing the jacking clamps as originally planned in order to jack the head back in place. Bolting was not tightened on the side plate flanges until its temperature reached that of the machine.

The top dryer roll was supported by drilling two holes through the roof frame sections using timber strongbacks and thread rods attached to a roller chain sling.

The job, which was performed during the Fourth of July shutdown, required about 24 hours.

The damage which could happen to a section of the dryer should cracks of this kind extend around the head would undoubtedly wreck a portion of the dryer and, correcting defects of this kind certainly comes under the heading of preventive maintenance of the first order.

(The method described by Mr. Ries was developed by the engineering department of Weyerhaeuser's Everett Mill, headed by Gerald F. Alcorn, Plant Engineer. It is an example of the ingenuity applied by the pulp and paper industry's maintenance men to keep up production of essential pulp and paper.—Editor)



Showing Minton Dryer side frame plate removed for replacement of cracked dryer head by method described in accompanying article.

\*Master Mechanic, Everett Mill, Pulp Division Weyerhaeuser Timber Company, Everett, Washington.

## B. C. Pulp's Expansion Near Completion

● British Columbia Pulp & Paper Company's \$750,000 expansion program authorized by the Canadian government last year is now approaching completion, according to President Lawrence Killam.

Extensions and improvements made at Woodfibre are now finished, but the Port Alice job will not be over for two or three months. The entire project has been delayed by difficulty in obtaining priority and delivery of needed equipment and materials, although it was facilitated to some extent by the fact that some of the larger units required were already in use at other plants and did not represent new manufacture.

The extensions at both the Port Alice and Woodfibre plants were similar in general nature, and they are expected to result in increasing production of bleached sulphite pulp about 50 tons between the two plants, giving the company a total output of about 400 tons daily.

Both plants were equipped with additional digesters of 18 by 55 feet dimensions, having a capacity of 22 tons, giving an increased daily production at each plant. These digesters were partly fabricated for the Lake Sulphite Pulp Company in eastern Canada and B. C. Pulp was fortunate in obtaining their delivery, especially in view of the shortage of steel plate.

The increased digester capacity meant that the steam plants and screening and drying departments would have to be stepped up, and two additional boilers of roughly 550 horsepower capacity were installed at each plant, in addition to a 2000-kva turbo-generator at Woodfibre and one 3500-kva at Port Alice.

Numerous changes had to be made in the size of pumps and motors handling the stock at various points in view of the readjustments needed in pumping the stock from one department to another.

In addition to the blow pits which were necessary for each digester, it was

necessary to construct a new Bellmer at Port Alice to handle the bleached stock at that plant, where the company anticipated most of the increased production over its dry machine brought from the old Swanson Bay plant, idle since B. C. Pulp took over the assets of Whalen Pulp & Paper Mills.

This machine was dismantled at Swanson Bay in the fall of 1941 and transported to Port Alice on scows. It was necessary, in order to complete this pulp drying machine, that both the equipment for the wet end and the cutting end should be purchased. After locating this needed equipment, priorities were obtained after considerable delay and the installations made.

Increased production at Port Alice necessitated an additional chlorinated stock washer and two rows of flat screens, which will soon go into operation.

In order to handle rush orders it has been necessary to buy and install winding equipment at Woodfibre, this plant having been exclusively on a sheet operation previously.

Mr. Killam reports a steady demand for all the pulp that his company can produce.

## Nickles Rests From Mill Duties

● Austin Nickles, general superintendent, Hawley Pulp and Paper Company, Oregon City, Oregon, spent the last two weeks of July vacationing at the Oregon beaches with Mrs. Nickles and son Albert.

## Thirteen Camas Men Join Up In July

● A total of 13 employees of Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, Camas, Washington, joined the armed forces during the month of July. Nine men became affiliated with the army, two with the navy and one each with the coast guard and air corps.

## Canada To Keep Men Within Own Industry

● Because labor shortage in British Columbia has been most acute in the logging camps, the newly established National Selective Service organization, headed by Elliott M. Little, formerly manager of Anglo-Canadian Pulp Company, is making special arrangements for maintaining an adequate supply of men for that branch of industry.

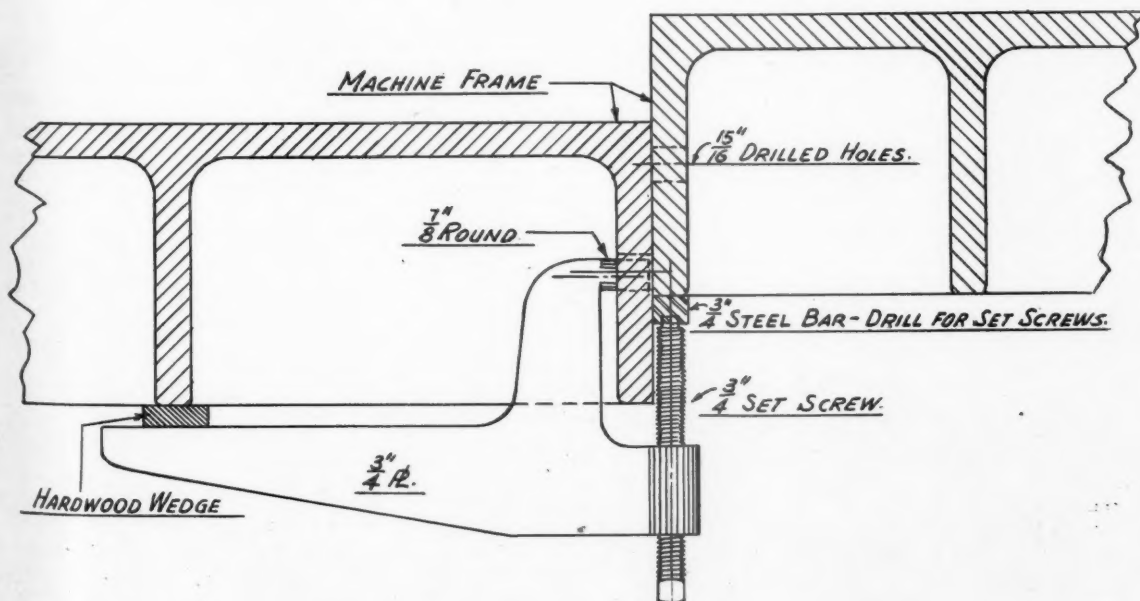
All job transfers are now channelled through the Unemployment Insurance Commission, headed by James H. McVety, Vancouver. When men engaged in essential industry desire to transfer from one company to another they must make formal application through their employers. While jobs are not strictly "frozen" and men may move from one employer to another the general intention is to keep the labor supply within the specific industrial category. That is to say, men will probably be denied the privilege of moving from the logging industry or pulp mills to take city jobs unless they are able to give good grounds for making the change.

## Paper For Government May Contain Canadian Pulp

● The American Paper & Pulp Association has advised the members of the industry that many inquiries have been received as to the percentages of Canadian pulp that can be utilized in paper produced for government agencies.

"We are informed," the Association reports, "that Federal departments and agencies have adopted the policy that any paper purchased by them may contain any amount of Canadian pulp at this time. In case any governmental agency raises a question in this regard, we would appreciate being informed."

In the past the rule has been that suppliers to the Federal government must use American materials if they are available. However, the regulation was not uniformly enforced.



Design of jacking clamp made by the Weyerhaeuser Everett Mill engineering department to facilitate removal of Minton Dryer frame section to permit replacement of cracked dryer head.

## Puget Sound Earmarks 73% of Income for Taxes

Tentatively until new tax law is enacted, Puget Sound Pulp & Timber Company sets aside 73.3% of first six months' earnings for taxes . . . Cuts dividend on common stock from 50 cents to 25 cents per share per quarter . . . Production, Sales and Earnings before taxes set new records.

IN its informal report to stockholders covering the first six months operations, the Puget Sound Pulp & Timber Company points out that the proposed new corporation taxes come very close to killing the goose that lays the golden eggs for employees, stockholders and the local, state and federal governments. If the proposed law is enacted many corporations will be so weakened they will be unable to stand the strain of declining volume. Quoting from the report:

"In no previous period has the capacity, efficiency and earning power of your Company been more clearly demonstrated than in the first six months of 1942. Production, sales, earnings before taxes—all established new high records.

"Paradoxically, for this record-making period it seems advisable to limit the common stock dividend to 25c a share, compared with 50c a share paid for each of the last several quarterly periods. The reasons:

"Profits available for dividends cannot be determined finally until Federal tax rates for 1942 are known, which will probably not be until some time between September and November.

"The tax bill as voted by the House of Representatives, July 20th, set a combined normal and surtax rate of 45 per

cent on normal income, plus 90 per cent on so-called excess profits income, plus the capital stock tax.

"Net effect of these rates would be a Federal tax amounting to about 82.2 per cent of your Company's operating income. Revisions in the House bill by the Senate are to be expected; what the changes may be cannot be conjectured at this time.

"Tentatively, the Company has set aside 73.3 per cent of the first six months' operating earnings for Federal taxes. This compares with 65.5 per cent provided last year. A retroactive increase in tax provision will be necessary if the final tax bill calls for 45 per cent combined normal and surtax, followed by 90 per cent excess tax and the capital stock tax.

"Facing a perplexing tax problem, the evident intent of Congress is to increase Federal revenue on a tax basis as equitable as possible. All of us recognize that in wartime the interests of the individual must be subordinated to the needs of the Nation. Even so, a tax consuming over 82 per cent of the stockholders' profits appears to be too high to serve the national interest, both this year and the years ahead.

"In the first place, even the highest excess profits tax rate considered, namely 94 per cent, leaves the estimated tax

revenue more than two billions short of the desired goal, indicating the need for a broader tax base.

"In the second place, the presently considered 45-90 per cent tax threatens seriously to deplete our richest source of tax revenue for the years to come.

"A corporation with a sound physical plant and strong financial structure is like a healthy, prolific vine: it will produce an abundance of tax revenue every year, with no impairment of the source. But when tax rates threaten to render record business volume an all but profitless operation, a corporation ceases to resemble a prolific vine, becomes like a mine or quarry: depleted as it is worked. Reproduction is exchanged for depletion; multiplication is traded for subtraction.

"Clear indication of the effect of tax rates named in the bill passed by the House (and now being considered by the Senate) is obtained by translating your Company's operations for the first six months of 1942 into terms of the owner of 100 shares of common stock. Thus:

"The Company manufactured and sold about 26.3 tons of wood pulp for each 100-share owner, compared with 19.7 tons in the first six months last year.

"Sale of this pulp realized \$1,480; last year, \$1,119.

"Operating earnings were \$501 per

### Operating Summary First Six Months, 1942

In the following tabulation tentative figures are shown as provision for Federal taxes and net profit from operations in 1942, subject to revision after the new tax law has been enacted. Comparative tax and net profit figure for 1941 represent revisions of figures published a year ago, giving effect to higher Federal tax rates which were applied retroactively later in that year.

	January-June		Increase or Decrease in 1942 Period
	1942	1941	
Production, tons .....	86,531	63,475	23,056
Average daily production, tons .....	478	351	127
Sales, tons .....	86,074	64,468	21,606
Net sales .....	\$4,836,883	\$3,659,436	\$1,177,447
Operating profit before depreciation .....	1,890,338	1,623,429	266,909
Depreciation .....	251,654	177,669	73,985
Profit before Federal tax provisions .....	1,638,684	1,445,760	192,924
Provision for Federal taxes* .....	1,201,152	947,552	253,600
Net profit .....	437,532	498,208	60,676†
Net profit per share outstanding June 30:			
Preferred Stock .....	7.80	8.84	1.04†
Common Stock .....	1.24	1.42	.18†
June 30th:			
Current assets .....	3,385,416	2,539,832	845,584
Current liabilities .....	2,828,456	1,666,085	1,162,371
Current ratio .....	1.20 to 1	1.52 to 1	.32 to 1†
Working capital .....	556,960	873,747	316,787†

\*At the rate of 73.3 per cent of profit before Federal tax provisions in the 1942 period and 65.5 per cent in the 1941 period. On these base tax provisions were equal to about \$3.67 per common share in the 1942 period and to \$2.89 in the 1941 period.

†Decrease in 1942.



100 shares, compared with \$442 last year. These earnings are subject to Federal taxes.

"A Federal tax levy of 82.2 per cent would consume \$412 of operating earnings; last year \$290 in Federal taxes per 100 shares was provided in the comparable period.

"Six months' profits after tax would therefore be \$89 in 1942; it was \$153 in 1941.

"Preferred dividends for the half-year required the equivalent of about \$10 per 100 common shares in both 1941 and 1942.

"Earnings of \$501 in the first six months of 1942 would thus produce a maximum of \$79 for the 100-share owner in the business, before any provision for note payments and contingencies.

"The effect of taxes on earnings applicable to 100 shares of common stock is shown in Figure I, in which comparison is made between the amount of taxes provided in the first half of 1941, the amount tentatively set aside for the first half of 1942, and the amount which will have to be provided if the final tax bill calls for 45 per cent combined normal and surtax, plus 90 per cent excess profits tax, plus the capital stock tax.

"There seems to be a tendency on the part of the public as well as the taxing authorities to regard excess profits rates as not affecting the rank and file of individuals since such taxes are applied to corporations. It has been estimated that about one out of every seven persons owns stock in some American corporation. In the case of many, dividends is their chief or sole source of livelihood. Probably 20,000,000 Americans are directly affected by excess profits taxes.

"With full patriotic regard for the Nation's present need for tax revenue, the foregoing facts and figures seem amply to demonstrate that any combination of tax rates which consumes over 82 per cent of the stockholders' earnings is not in the best interests of the national economy.

### Logging Operations

"The logging program at the Company's 100,000 acre timber property on Vancouver Island is proceeding on schedule. Rehabilitation and installation of equipment has advanced to the point where actual logging has begun. It is anticipated that substantial production will be reported in the next interim report to stockholders.

### Pulp Production Sets Record

"Production of 4,615,000 tons of all grades of wood pulp in the first five months of 1942 exceeded last year's output for the comparable period by 564,000 tons, a gain of 13.9 per cent.

"United States mills have set an unbroken succession of output records beginning with 1939. It now appears that a new all-time record will be established in 1942.

"All chemical grades of pulp combined, domestic production of 3,747,000 tons in the first five months of 1942 constituted a gain of 505,000 tons, or 15.5 per cent, over the corresponding months of 1941.

"Production of mechanical grades, amounting to 868,000 tons in the 1942 period, was 59,000 tons above last year, a 7.3 per cent increase.

"Most notable percentage gain in 1942 to date has been accomplished in production of unbleached sulphite pulp:

568,000 tons in the first five months of this year, constituting an increase of 108,000 tons, or 23.5 per cent, over the comparable 1941 period.

"Puget Sound Pulp & Timber Co., specializing in unbleached sulphite pulp manufacture, increased the output of its Bellingham mill 20,954 tons in the first five months of 1942, thus increasing its output 40.9 per cent over the comparable months of 1941, and contributing nearly one-fifth to the total increase accomplished by the entire domestic industry.

"One year ago the threat of pulp shortage caused grave concern. Through the combined efforts of the industry this threat has been removed. Record demand is being satisfied."

### Pacific Paperboard Building Screen Room

● Pacific Paperboard Company, Longview, Washington, is building a new screen room for number one machine, which is to be completed by the middle

of August. The new screen room adjoins the old one which will become part of the machine room. The five Sandy Hill flat screens will be moved into the new building.

### Women In Beater Room At Pacific Paperboard

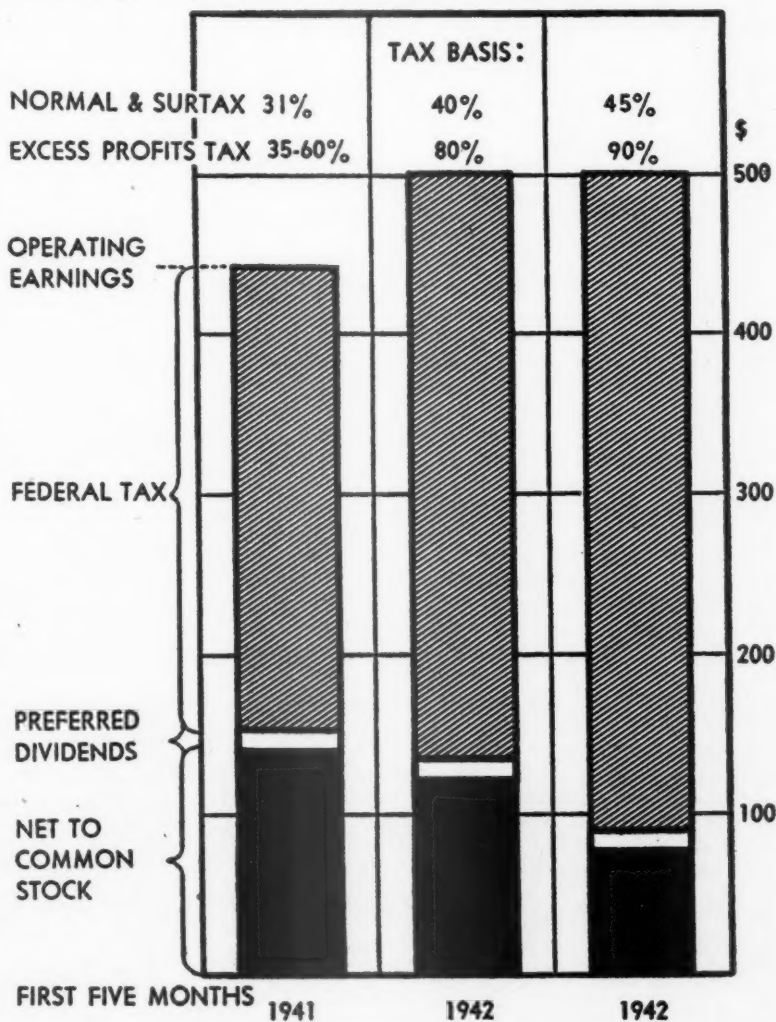
● Pacific Paperboard Company, Longview, Washington, is now employing women in the beater room and finishing room. Women were formerly employed only in the egg filler and boxmaking departments.

### Ted Osmund Vacations At Seashore

● Ted Osmund, of Portland, vice president of the Oregon Pulp and Paper Company and the Columbia River Paper Mills, spent the last two weeks of July vacationing at the Oregon beaches with Mrs. Osmund.

FIGURE I

Effect of Taxes on Earnings Applicable to 100 Shares of Common Stock of the Puget Sound Pulp & Timber Company.



## St. Helen's "Salvage Shop" Keeps the Machines Running

**S**T. HELENS PULP AND PAPER COMPANY, St. Helens, Oregon, has made a concerted effort, since the United States entered the war, to recondition all usable metal parts and to immediately dispose of all metal scrap that is worn beyond the point of reconditioning.

The conservation program is centralized in the company's salvage shop which was put in active operation last February, under the foremanship of H. R. O'Dell, master mechanic. Three long-time employees, each a specialist in his respective field, are employed full time in the salvage shop. Fred Myers, formerly head pipe fitter, has charge of used valves, water and steam regulators, pipe fittings and governors. Henry Wheeler has charge of bolts, washers and other small equipment as well as salvaging rubber, wires and screens; George Martin, former master mechanic, supervises re-babbiting bearings and reconditioning chain.

Mr. O'Dell reports that all metal parts around the mill not in current use are cleaned and inspected in the salvage shop. Those that can be put in first class operating condition are repaired, tagged and stored in barrels or on shelves. Each group is segregated according to size and type, to prevent damage and to facilitate locating when needed.

To start with the salvage shop was housed in a building about 50 by 60 feet, but the department has been so successful that this space proved insufficient to accommodate all of the reconditioned equipment, so the building was recently expanded to 60 by 100 feet.

A bolt threader is the only piece of machinery in the salvage shop and this was moved in from the machine shop.

Gear units brought into the shop are taken apart, cleaned and inspected. If reconditioning is necessary every attempt is made to put them in first-class operating condition, whether this involves broken gears, shafting or housing. In the case of broken gear teeth steel pins are attached and ground to the right pitch. Sometimes badly worn gears are kept on hand to be used for temporary replacement units, in case of a breakdown in the plant. These can be used for a few days

while needed replacements are being obtained. Reconditioned gears are tagged, listing the size, pitch of gears, number of teeth and where the gears have been used.

Pipe removed from use comes into the salvage shop with the fittings attached. Both pipe and fittings are cleaned and if found to be re-usable are appropriately tagged and stored.

Valves coming to the shop are disassembled, cleaned and inspected. If the valve seats are worn beyond repair they are replaced with new body and wedge, keeping the bonnet and stem. The reconditioned valves are all tested, according to Mr. Myers, at 300 or 400 pounds pressure.

For storage the valves are segregated according to iron and brass valves, as to types—including both high and low pressure valves—globe and gate valves, and according to size.

Pipe fittings are segregated as to type—flange and screw—are cleaned and reconditioned and stored. These include T's, Y's, elbows, crosses and others. The screw-pipe fittings are cleaned with a wire brush.

An incomplete list of items stored in the salvage shop, which are reconditioned and ready for immediate installation, include the following: Brushing stock, babbitt, turnbuckles, U bolts, brass pipe clamps, springs, tin shims, key stock, roller and ball bearings of most all sizes, boiler equipment such as manhole plate yokes, caps for mud drums; air hose connections, bronze and brass shower sprays, cable clamps of many sizes, sprinkler pipe fittings, valve packing glands, short pieces of threaded pipe—all of which is stored in the miscellaneous rack. There are several air hoists, collars of various sizes, friction pulleys; hundreds of feet of various kinds and sizes of roller chain and flat link chain; bolts by the thousand, all rethreaded and reconditioned; pipe nipples and pipe bushings from one-eighth inch to six inches; re-babbitted bearings, high and low pressure steam traps and valves.

Brass and copper waste such as fourdrinier wires, brass bushings, fittings and valves are kept in a bolted and locked compartment in the salvage shop.

Items are released from the salvage shop only by signed requisition stating size and type of unit and

where they are to be used.

According to Max Oberdorfer, Sr., president and general manager, and Max Oberdorfer, Jr., assistant to the general manager, the salvage shop has been highly successful in keeping the plant operating, and, too, in holding down to the very minimum requests for new materials.

### Paper Mill Operations Down to 80.2%

● In a year's time the law of supply and demand has brought about a curtailment in the paper industry of 21.7 per cent without benefit of government edict.

For the week ending July 26, 1941, the American Paper & Pulp Association reported production at 101.9 per cent of capacity. For the corresponding week of 1942 the preliminary report showed operations at 80.2 per cent of capacity.

From a high of 104.5 per cent of capacity in January of this year production has declined month by month as the backlog of orders were reduced and new business failed to hold up, until in June the Association's figure was 87.2 per cent of capacity. June, 1941, operations were at the rate of 99.3 per cent of capacity.

Paperboard has dropped well below its peak, too. June this year showed 72 per cent of capacity compared with 94 per cent a year ago, according to the National Paperboard Association. From the high point of 102 per cent in January paperboard has declined steadily along with paper. The week ending July 25th indicated operations were at 74 per cent of capacity.

It is believed that many inventories of finished paper and board are still large. Stocks that were accumulated in fear of a shortage are now being liquidated, some rapidly and some slowly, depending upon the war's effect upon the business of the owner of the inventory. The rate of future production is not predictable as the industry's operations will be governed by the needs of the war program directly and indirectly.

### Dan Phillips In Officers Training School

● Daniel B. Phillips, assistant in Pioneer-Flintkote's Corrugator plant in Los Angeles, recently left for the Army's Officers Training School.

Mr. Phillips is a graduate of the University of Washington and worked for the Longview Fibre Company from 1931 until last Fall when he became associated with the Pioneer-Flintkote organization.

### Barber Visits Ocean Falls

● W. R. Barber, technical director, Crown Zellerbach Corporation, returned to Camas, Washington, August 3rd, after a short business trip to Ocean Falls, British Columbia.

## B. C. Pulp and Paper Set Record in 1941

British Columbia's pulp and paper industry established new records in volume and value of production last year, according to the official figures issued by the provincial government.

With nearly all pulp and newsprint mills operating at capacity, output was maintained at a high level throughout the year. Total value of production amounted to \$27,723,000, compared with \$22,971,000 in 1940 and the ten-year average of \$15,692,000.

Pulp and paper were worth almost half as much as the province's lumber production.

A total of 275,788 tons of newsprint and 75,453 tons of other papers was produced during the year 1941, compared with 262,144 tons and 66,428 tons respectively in the previous year.

In addition to 322,034 tons of pulp manufactured into paper in British Columbia during the year 172,811 tons were shipped out of the province in that period.

Logs were exported last year to the

value of \$4,212,000, another all-time record figure. In 1940 the total value of exported logs was \$2,684,000. The ten-year average was \$2,912,000.

Although the official records do not specify the production of individual mills, Powell River Company and Pacific Mills continued as the newsprint producers, with both of these plants and the two mills of B. C. Pulp & Paper Company, the plants of Westminster Paper Company, Sorg Pulp Company and Sidney Roofing Company contributing to the pulp total.



The ST. HELENS PULP & PAPER COMPANY'S Salvage Shop is busy reconditioning equipment to keep the plant operating with the purchasing of a minimum of scarce metals.

No. 1, the bars of this niter cake crusher have been tipped with Stoodite to lengthen their life. A spare rotor is kept on hand. No. 2, threaded pipe fittings are stored in bins after reconditioning. No. 3, iron gate valves overhauled and ready for immediate service are stored on shelves. No. 4, flanged pipe fittings, repaired and cleaned are stored above kegs of reconditioned bolts. No. 5, rebabbitted bearings and a Reed stock valve are ready to go back into service.



## Fred Olmsted Transferred To San Francisco

● Fred A. Olmsted, technical supervisor, Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, Camas, Washington, was transferred temporarily to the San Francisco, California, offices of Crown Zellerbach Corporation early in August. He has taken over the former duties of R. J. Schadt who has been assigned to the Pulp and Paper Research of the War Production Board. Mr. Olmsted will assist Albert Bankus, vice president of the company. He is a past chairman of the Pacific Section of TAPPI and is principal of the Crown Willamette Paper School.

Mr. and Mrs. Olmsted left for San Francisco the first part of August.

G. H. Gallaway, assistant technical supervisor, is acting as technical supervisor at the Camas plant during Mr. Olmsted's absence.



FRED A. OLMSTED, Assistant to Albert Bankus, Vice President, Crown Zellerbach Corp.

## A. F. Richter Dies In Watertown

● August F. Richter, 68, consulting engineer and former president of the Stebbins Engineering & Manufacturing Company, and long a builder and designer of chemical pulp mills, died Thursday afternoon, July 16, at his home, Watertown, N. Y., after a long illness.

Surviving Mr. Richter are his wife, Mrs. Pearl F. Benson Richter; two children, Carl F. Richter, 150 Paddock St., president of the Stebbins company, and Mrs. Murray H. (Ruth E.) Bennett, Brownville; a step-daughter, Mrs. Paul (Pauline M.) Petrie, New York.

Mr. Richter began his business career as a clerk and timekeeper for the Remington Paper Company of Watertown. After two years in the service of that company, he helped in the construction of the plant of the High Falls Sulphite Pulp & Mining Company, later serving in the capacity of superintendent. He held that position until 1898, at which time he associated himself with the late Henry W. Stebbins. The two formed a partnership under the firm name of Stebbins & Richter, for the designing, equipping and operating of chemical pulp mills.

The firm of Stebbins Engineering & Manufacturing Co. was incorporated in September, 1903, with H. W. Stebbins as president, Mr. Richter as treasurer and the late George A. Stebbins, son of H. W., as secretary. In 1909 Mr. Richter purchased the interests of H. W. Stebbins, who retired from active business, and he became president of the company,

George A. Stebbins becoming secretary and treasurer.

In 1918 Mr. Richter purchased the interest of G. A. Stebbins and acquired the controlling interest of the Stebbins Engineering & Manufacturing Company. He continued as president of the company, also taking over the treasurership of the business.

The company by that time was doing an extensive business in machinery for sulphite mills and acid-proof linings for digesters. It also had developed an extensive foreign trade in the installation of the equipment in which it specialized.

The Stebbins company's foreign trade required Mr. Richter to travel frequently. His business took him to Scandinavian countries, continental Europe, the Far East, South America and various other nations of the world. Wherever sulphite pulp is produced Mr. Richter had many friends.

Mr. Richter resigned as treasurer about 1930, but continued as president of the Stebbins company until 1935, when he resigned that office, too, and devoted his entire time to research and development of new lining materials for the benefit of his corporation.

He sold the controlling interest in the company to his son, Carl F. Richter, who became president, and Edward F. Tucker, who became vice president, secretary and treasurer. The Stebbins organization serves the pulp and paper industry throughout the continent; in Canada through a subsidiary, the Canadian Stebbins Engineering & Manufacturing Co. of Montreal, and on the Pacific Coast through a second subsidiary, the Stebbins Engineering Corporation of Seattle, of which A. S. Quinn is vice president.

## Fix-Tex Replaces Cork In Bottle Caps

● Fir-Tex Insulating Board Company, St. Helens, Oregon, has developed a pressed board product replacing cork inside bottle caps. Mr. R. W. Simeral, general manager, says this product permits bottling at higher pressures than with the conventional cork lining, and it is claimed that there are less "leakers." The Fir-Tex lining is made from spruce and hemlock.

This is a special product of the plant. The lining is cut into sheets 18 inches wide by 8 feet long, and wrapped in flat bundles. These sheets are cut to size in the bottling plants.

Current limitation of cork imports lend emphasis to the importance of the substitute developed in the Fir-Tex laboratory; a substitute which is reported to be superior to the conventional bottle cap lining.

## Interest Shown in B. C. Pulp Bonds

● Canadian financial circles are showing some interest in the position of the 7 per cent general mortgage bonds of B. C. Pulp & Paper Company. The amount of the bonds outstanding is \$1,223,500.

With the exception of half yearly coupons due and paid May 1, 1935, November 1, 1937, and May 1, 1939, payment of the general mortgage bond interest due May 1, 1932, to May 1, 1942, inclusive was postponed until November 1, 1942.

However, the company was able to avail itself of a provision permitting earlier payment to the extent that the instalments originally due May 1 and November 1, 1941, were paid on December 29, 1941, while the coupon due May 1, 1942, was met on that date.

This indicates that interest now in arrears which has been postponed until November 1, 1942, amounts to 52½ per cent, plus interest. The half yearly coupon due November 1, 1942, will make the total due 56 per cent.

## Black Named Powell River Mechanical Superint'd.

● Ross Black has been appointed mechanical superintendent at Powell River Company's mill. He has been with the company for the past ten years, following his graduation from the engineering department at University of British Columbia, and was superintendent of maintenance prior to his promotion.

## O'Dells Vacation At Beach

● H. R. O'Dell, master mechanic, St. Helens Pulp and Paper Company, St. Helens, Oregon, spent his two weeks' vacation with Mrs. O'Dell, visiting the coast beaches, from July 7th to 21st. They started out at Newport, Oregon, and ended up at Long Beach, Washington.

## Hatch Visits Son On Vacation

● R. S. Hatch, research director for Weyerhaeuser Timber Company, left Longview, Washington, the middle of July, for a two-week vacation. He and Mrs. Hatch visited their son in San Mateo, California, and spent one week at Carmel.

# The Navy "E" awarded to our employees

*A letter we were very  
happy to receive*

THE SECRETARY OF THE NAVY  
WASHINGTON

May 20, 1942

Dear Mr. Swigert:

To give full credit where it is justly due is one of the fundamentals of the Naval Service. It is, therefore, my duty, as well as my great pleasure, to advise you that the Electric Steel Foundry Company has been selected by the Navy Board for Production Awards to receive the Navy "E" for excellence in industrial production.

For almost forty years the "E" has been the Navy's symbol of a job well done. I can think of no honor more highly respected among the officers and men of the Fleet.

In token of the service your company has rendered the nation, you now have the right to fly the Navy "E" pennant over your plant. Your fellow-workers in the offices and at the machines are privileged to wear the Navy "E" lapel insignia.

Our battle-fronts are not only on foreign soil. We have a battle-front right here — the battle for production of war materials. Congratulations to you and your soldiers of production for your significant contribution toward winning this increasingly important home battle. Keep up the good fight! For in this most critical war in our nation's history, the first great victory must be won on the line of supply.

Yours sincerely,

Mr. C. F. Swigert, Jr., President  
Electric Steel Foundry Company  
2141 North West 25th Avenue  
Portland, Oregon

*Frank Knox*

In normal times ESCO products are used in many of the country's industries; in logging and saw-mill operations, pulp and paper mills, mines and smelters, cement plants, and in highway, dam and bridge construction; products requiring the highest quality of castings and fabrication, such as stainless steel digester equipment, dipper and dragline buckets, manganese chain and rigging, and crusher equipment.

The skilled workmen, metallurgists, and other technical men, who have made it possible for us to tackle the tough jobs of peacetime, are now making it possible for us to successfully accomplish the tough jobs of war-time which the Navy has called upon us to do.

We are PROUD of our "SOLDIERS OF PRODUCTION" and their doubled and redoubled efforts.

We recognize the Navy "E" award as a challenge to even greater efforts.

**ELECTRIC STEEL FOUNDRY, Portland, Oregon**  
Branches at Seattle, Eugene, San Francisco, Los Angeles, Honolulu

# Crown Zellerbach Reports A Record Fiscal Year

Statement for fiscal year ending April 30th reveals new highs in production, sales, profits and taxes—Taxes rise 53%—Statement analyzed and graphically presented.

THE annual report issued July 22nd by the Crown Zellerbach Corporation for the fiscal year ending April 30th clearly presents the company's operations in both financial and non-financial terminology. Charts show the disposition of the gross income dollar, how the debt retirement program has strengthened the position of the stockholders, production for the past five years, taxes and disposition of profits for the same period.

For the second consecutive year, Crown Zellerbach Corporation set new records in production, sales, wages and salaries paid, and net profits, notwithstanding an increase of 53% in U. S. and Canadian income taxes, and a \$2,000,000 reserve for wartime and other contingencies. Working capital continued to improve and prepayments of \$4,000,000 were made on term bank loans.

The independently audited report for the fiscal year ended April 30, 1942, shows consolidated net profit of \$9,108,801, after all charges including depreciation, depletion, interest, minority interest in subsidiaries' earnings and provision for Canadian and U. S. income and excess profits taxes of \$8,784,000 based on laws in effect at the close of the year and the \$2,000,000 special reserve. This is equal, after provision for regular dividends on 529,655 shares of \$5 preferred to \$2.85 on 2,261,199 shares of common. In the preceding year, net profit was \$8,866,287, equal to \$2.75 on common.

Dividends aggregating \$5 a share on preferred and \$1 a share on common were declared during the year. These dividends, aggregating \$4,909,474, represented a distribution of 54% of net profits. In the 1941 fiscal year payments on both classes of stock were identical.

## No Fear of Shortage Now

● In the annual report, signed by Louis Bloch, chairman, and J. D. Zellerbach, president, outlook for 1942-1943 fiscal period was discussed at length. Production since October, 1941, based on reports from the pulp and paper industry, has exceeded orders so that any probability of a paper shortage which may have previously existed has been eliminated for the present. "For a considerable time up to the present writing, our mills have operated at maximum capacity; however, the decline in orders received since the close of our fiscal year gives some indication that our present rate of production may be reduced in the near future by the shrinkage in demand."

Calling attention to the growing scarcity of materials as the result of the war, the executives said any appreciable reduction in either supplies or raw materials will force curtailed production in some mills and possibly shutdowns in others notwithstanding best efforts to effect substitutions. OPA price ceilings have been supplemented by specific regulations relating to pulp and paper. These apply to sale of Crown Zellerbach products and the merchandise purchased for resale by the merchandising divisions.

## Production Shows 5.4% Gain

● Pulp and paper produced in the fiscal year just ended was 715,342 tons, an increase of 36,784, or 5.4%, over the preceding period. Consolidated net sales, including sales of purchased goods by the merchandising divisions, were \$86,336,000, an increase of \$18,110,000 or 26% over the preceding year. Demand was stimulated by increased industrial and commercial activity as a result of the defense program and later the war effort.

One of the important factors in last year's record earnings was an outstanding fourth quarter which accounted for net of \$3,776,588. A comparison of consolidated net profit for the past two years is given in a table.

The balance sheet, as of April 30, 1942, shows prepayments of \$4,000,000 on term bank loans, leaving a balance of \$5,000,000. Current assets were \$34,898,654, including cash of \$4,905,253, and current liabilities \$12,587,595, indicating consolidated working capital of \$22,311,059 after converting the accounts of the Canadian subsidiaries to the equivalent in U. S. dollars. A year earlier working capital was \$18,714,936 on the same basis. Current assets on April 30, 1941, totaled \$30,761,504, while current liabilities were \$12,294,692. Ratio of current assets to current liabilities was 2.77 as of the close of the last fiscal year, compared with 2.50 a year earlier. Inventories of finished products were \$9,140,063 on April 30, last, as against \$7,214,926 a year earlier. Materials and supplies were carried at \$6,994,083 compared with \$5,445,381.

Consolidated, independently audited income account of Crown Zellerbach Corp. and subsidiaries for the fiscal year ended April 30, 1942, compares as follows:

## Distribution of Income Dollar

● In the report the distribution of Crown Zellerbach's gross income of \$89,401,000 is analyzed in detail. Purchases of manufacturing materials and supplies and of merchandise resold amounted to \$41,767,000, taking 46.7c out of each dollar; salaries and wages, other than salaries paid executives and other officers totaled \$17,881,000, taking 20c of each dollar; salaries of executives and other officers amounted to \$490,000, taking .6c of each dollar; taxes, including property taxes totaled \$11,088,000, tak-

ing 12.4c out of each dollar; operating expenses, interest and other expenses net amounted to \$2,447,000 or 2.7c of each dollar; depreciation and depletion totaled \$4,620,000 or 5.2c of each dollar; provision for wartime and other contingencies of \$2,000,000 took 2.2c of each income dollar; and, return accrued to stockholders as compensation for the use of facilities provided by them, representing a return of 10½ per cent on an average investment of \$85,668,000, totaled \$9,108,000 or 10.2c out of each gross income dollar.

## Distribution of Production

● Paper and wood pulp produced by the Crown Zellerbach Corporation during the past fiscal year established a new high record with a total of 715,342 tons; a 5.4 per cent increase over the previous year. Comparison by major classes for the past two years is provided by the accompanying table.

## Properties and Equipment

● Total additions to Crown Zellerbach plants, logging facilities and timberlands during the year amounted to approximately \$3,800,000 compared with \$3,580,000 for the preceding year. Included in the above amount is \$1,084,000 additions to the properties of the Canadian subsidiary at the par of exchange.

Depletion and provision for depreciation of all properties amounted to \$4,619,935.91, an increase of approximately \$210,000 compared with the total for the preceding year, practically all of which is due to increased operating time of the mills.

Notwithstanding the abnormally high rate of operation for the past year, the necessary repairs have been made to maintain our plants in efficient operating condition, the report states. Expenditures for maintenance and repairs amounted to approximately \$3,700,000.

"During the last quarter of the past year, however, because of priorities imposed by war conditions, it became increasingly difficult to obtain construction and repair equipment and materials. For the duration of the war, plant improvements and maintenance and repairs, other than the minimum requirements, will have to be considerably curtailed.

"During the year the corporation added new seedling plantings as a further expansion of its long range forest management program. Taxes and expenses of

	Years ended April 30,	
	1942	1941
First quarter	\$ 2,251,726	\$2,244,315
Second quarter	2,224,233	2,085,550
Third quarter	2,856,253	2,118,688
Fourth quarter	\$3,776,588	*2,417,734
Net profit for the year	\$11,108,800	\$8,866,287
Less provision for wartime and other contingencies	2,000,000	
Balance of profit	\$ 9,108,800	\$8,866,287
†Includes year-end adjustments (net credit) of \$974,655.34, of which \$530,000 represents a net excess of provision for taxes on income in respect of the year ended April 30, 1942, and prior years. *Includes year-end adjustments (net credit) of \$356,105.51.		



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maintaining timberlands amounting to approximately \$170,000 were absorbed in expenses during the year.

### Continuity of Service

• "The record of continuity of service improved immeasurably during the fiscal year with a net increase of 610 employees holding service pins. Currently, 5,434 men and women are holders of Crown Zellerbach Corporation service emblems, representing from 5 to 50 years' association in the Corporation. The figure equals 55.04 per cent of the Crown Zellerbach Corporation's payroll census, and is represented in the following service levels.

5 to 10 years.....	2,301
10 to 15 years.....	1,404
15 to 20 years.....	887
20 to 25 years.....	485
25 to 30 years.....	165
30 to 35 years.....	107
35 to 40 years.....	49
40 to 45 years.....	30
45 to 50 years.....	5
Over 50 years.....	1

### Employees in Service

As of July 22nd, 652 employees of the Crown Zellerbach Corporation and its subsidiaries were serving in the Army, Navy, Marine Corps and Coast Guard. The report states, "Fully expecting the return of these employees to civilian duties with the organization after Victory is won, their associates in Crown Zellerbach Corporation honor them by pledging full production of essential military and civilian requirements and by continued purchase of War Bonds through the medium of systematic payroll deductions."

### Sidney Roofing Starts New Cylinder Machine

• The Sidney Roofing & Paper Company, operating plants in Victoria and Vancouver, B. C., has put into operation a new cylinder machine—the third such unit installed—to increase production of roofing felts, building papers and box board at Victoria.

The press, dryer, calendar and winder sections were purchased from a mill in eastern Canada, dismantled, shipped in ten carloads and rebuilt at the company's plant on Victoria's inner harbor.

The vat section was designed for an eventual four cylinder machine, one of which is in operation at present. All repairs and reconstruction was completed in the company shop and in Victoria machine shops.

The machine is housed in a new concrete and brick structure, 260 feet by 50 feet, of two-floor construction. The lower floor contains all the drive equipment of the cylinder machine, stock chests, jordan, pumps, various auxiliary equipment and a new transformer vault for incoming 4,000-volt service.

The dryers have been equipped with Johnson rotary pressure joints, Midwest-Fulton drainage system and Foxboro temperature control.

A hot air system will be installed to increase drying capacity.

Earlier enlargement of the steam plant allowed adequate supply of steam.

R. W. Mayhew is president of Sidney Roofing Company.

Consolidated, independently audited income account of Crown Zellerbach Corp. and subsidiaries for the fiscal year ended April 30, 1942, compares as follows:

	1942	1941	1940
Sales .....	\$86,336,150	\$66,217,406	\$56,526,576
Cost of goods sold .....	55,889,897	42,157,589	36,656,135
Profit on sales .....	\$30,446,253	\$24,059,817	\$19,870,441
Other operating income .....	1,365,798	1,833,929	1,594,383
Gross operating income .....	\$31,812,051	\$25,893,746	\$21,464,824
Operating expenses .....	7,738,277	6,786,311	6,544,944
Operating profit .....	\$24,073,774	\$19,107,435	\$14,919,880
*Other income (net) .....	683,725	395,558	176,827
Total income before pr. charges .....	\$24,757,499	\$19,502,993	\$15,096,707
Depreciation .....	3,834,108	3,599,520	3,456,010
Depletion .....	785,827	810,836	697,575
Interest .....	147,917	436,541	532,193
Min. interest in subsidiaries' income .....	96,846	71,809	86,629
Income tax (U. S. and Canada) .....	8,784,000	5,718,000	2,204,806
Reserve for wartime and other contingencies .....	2,000,000		
Net profit .....	\$ 9,108,801	\$ 8,866,287	\$ 8,119,494

\*Includes in 1942 \$750,495 dividends from Fibreboard Products Inc. (pro rata of consolidated earnings for the year exceeded the dividends received by \$111,345) less other expenses of \$66,770. In 1941 dividends of \$562,785 received from Fibreboard (pro rata of consolidated earnings for the year exceeded dividends received by \$293,427) less other expenses of \$167,227. In 1940, dividends from Fibreboard totaled \$468,930 (pro rata of consolidated earnings exceeded dividends by \$269,828) less other expenses of \$292,103.

Consolidated independently audited balance sheet as of April 30, 1942, compares as follows:

ASSETS			
	1942	1941	1940
Cash .....	\$ 4,905,253	\$ 5,885,815	\$ 3,948,848
Marketable securities .....	948,696	900,000	
Notes and accounts receivable .....	11,505,181	10,464,899	8,913,715
Other receivables .....	477,820	117,232	117,232
Inventory:			
Finished products .....	9,140,063	7,214,926	7,139,604
Goods in process .....	927,558	733,251	600,709
Materials and supplies .....	6,994,083	5,445,381	5,001,180
Total current assets .....	\$34,899,654	\$30,761,504	\$25,721,288
Invest in Fibreboard .....	5,186,131	5,186,131	5,186,131
Other inv. at cost or less .....	272,880	1,217,044	1,072,420
Miscellaneous receivables—non-current .....		116,816	157,957
Land, timber, etc. (net) .....	22,591,908	21,785,673	22,583,163
Buildings, machinery, equipment (net) .....	37,907,700	39,480,645	40,069,532
Intangibles, less amortization .....	7,228,880	7,339,259	7,428,615
Deferred items .....	1,115,847	809,161	817,667
Total assets .....	\$109,202,000	\$106,696,233	\$103,036,783
LIABILITIES			
Accounts payable .....	\$ 4,357,049	\$ 3,844,409	\$ 3,204,387
Accrued payroll and interest .....	1,256,349	1,275,229	1,351,457
Taxes accrued .....	6,565,812	6,801,069	3,114,920
Other current liabilities .....	408,385	373,985	347,642
Total current liabilities .....	\$12,587,595	\$12,294,692	\$ 8,018,406
Notes and contracts payable .....	5,188,664	9,226,802	13,800,000
Reserve for wartime and other contingencies .....	2,000,000		
Subsidiaries stocks publicly held .....	1,238,514	1,186,839	1,187,290
Preferred stock (\$100 a share) .....	52,965,500	52,965,500	52,965,500
Common stock (\$5 par) .....	11,305,995	11,305,995	11,305,995
Capital surplus .....	9,129,581	9,129,581	9,129,581
Earned surplus .....	14,786,151	10,586,824	6,630,011
Total liabilities .....	\$109,202,000	\$106,696,233	\$103,036,783

\*Includes dividend of \$117,232 from Fibreboard Products Inc. in 1942.



## Crown Zellerbach Production

	Years Ended April 30th		1941	
	1942	% of Total	1941	% of Total
News and other print papers	275,055	38.4	282,004	41.6
Coarse papers and tissues	317,512	44.4	286,913	42.3
Board	41,938	5.9	35,493	5.2
Total paper and board	634,505	88.7	604,410	89.1
Pulp for sale	80,837	11.3	74,148	10.9
Totals	715,342	100.0	678,558	100.0

## Disposition of Profits — Five-Year Period

	Years Ended April 30th (000 omitted)				
	1938	1939	1940	1941	1942
Profit before deduction of taxes on income	\$7,488	\$6,320	\$10,324	\$14,584	\$17,893*
United States Government and Canadian taxes on income	1,277	1,305	2,205	5,718	8,784
Net profit	\$6,211	\$5,015	\$ 8,119	\$ 8,866	\$ 9,109
Dividends	4,338	3,775	4,909	4,909	4,909
Retained profit	\$1,873	\$1,240	\$ 3,210	\$ 3,957	\$ 4,200*

\*After deducting provision of \$2,000,000 for wartime and other contingencies.

## Longfibre Bag Factory Team Beats Pipe Fitters

● The bag factory team of Longfibre Softball League, made up of employees in various departments of Longview Fibre Company, Longview, Washington, beat the pipe fitters three to two in the play-off game determining the winner for the first half season. The bag factory held first place in the second half at the end of July.

## Tipka Married Last Month

● V. L. Tipka, research engineer, Hawley Pulp and Paper Company, Oregon City, Oregon, was married to Miss Anita Gilkeson, July 29th. The ceremony was read by Reverend Dunlop at Stevenson, Washington. The bride has resided in Oregon City for the past few years.

Mr. Tipka expects to join the United States Army by the middle of August.

## May Use Corrugated Fruit Boxes In B. C.

● Corrugated paper boxes may be used extensively for the first time this year in packing apples and other fruits in British Columbia.

Faced with a shortage of box shooks due to pressure on lumber mills from other quarters and scarcity of labor, fruit association executives fear that they will not be able to meet all requirements for wooden boxes and expect that cardboard boxes may provide an effective substitute, if not a permanent replacement.

Canadian Boxes, Ltd., Vancouver, headed by J. H. McDonald, is actively negotiating with growers' associations in the Okanogan valley, where most of the fruit is packed, hoping to sell at least 750,000 boxes in that territory this season.

Sales Manager J. H. Forster made a trip into the Okanogan last month and conferred with growers' representatives in an effort to convince them that the cardboard may solve the problem created by this season's emergency. Indications are that the apple crop alone in the Okanogan will be between six and seven million boxes, compared with about 4,500,000 boxes last year. In view of the elimination of the British market for fresh apples this year for the first time there will probably be a considerable surplus of apples and additional container stock is required.

If the cardboard box manufacturers are able to win an important share of the fruit trade it will be a blessing indeed at this time inasmuch as the markets that used to take large quantities of cardboard boxes, notably the fish and canned goods export markets in Australasia and South Africa, have been eliminated by Canadian government orders directing that all canned salmon and herring produced in British Columbia must go to the United Kingdom, and the latter market insists that the cans must be packed in wood.

The extent to which the box manufacturers are able to do business with the fruit growers will depend on the size and type of container required, but the manufacturers are ready to go a long way in meeting the market's requirements as they recognize the importance of its future possibilities.

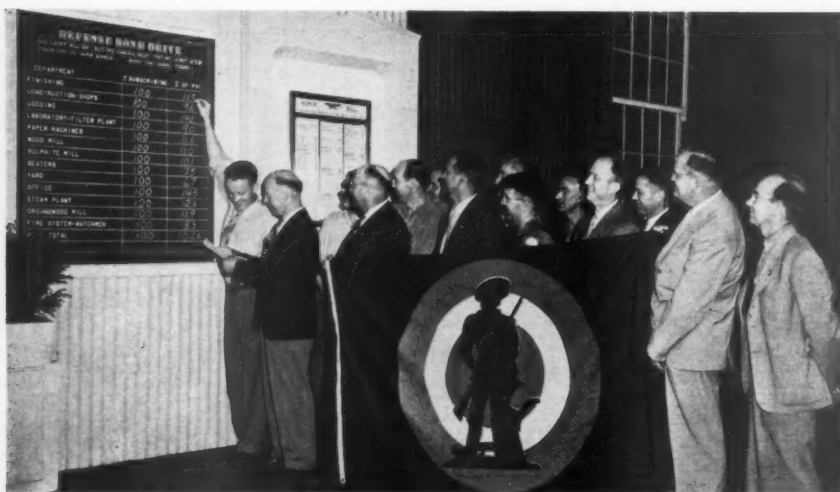
Efforts to "sell" the Okanogan on cardboard containers have been repeatedly made in the past, but with indifferent success. The shortage of wooden boxes, however, has created a new opportunity which manufacturers of cardboard containers plan to capitalize.

Other British Columbia companies are experimenting with the manufacture of paper containers for the packing of fruit juices and similar liquid products which have been denied the use of cans under orders of the Wartime Prices and Trade Board.

## MacKenzie Joins Canadian Air Force

● R. C. MacKenzie, for the past three years traffic manager for Powell River Company and previously in charge of shipping at the mill, has been granted leave of absence to serve in the Royal Canadian Air Force.

He has been succeeded as traffic manager by Oswald Crawford, formerly general agent of the Northern Pacific Railway in Vancouver and latterly with Johnston National Storage.



The WEST LINN, Oregon, mill of the Crown Willamette Paper Co., Division of Crown Zellerbach Corp., receives the first Bullseye Minute Man flag in Clackamas County and the second to go to a major industrial firm in the State of Oregon.

A joint union-management committee headed the drive which resulted in 100% of the West Linn employees contributing 10.26% of the payroll for War Bonds each month.

At the presentation of the flag July 9th, left to right, ED CLARK; TOM SMITH, President of the Clackamas County Central Labor Council and a West Linn employee who was chairman of the joint committee; CLARENCE E. BRUNER, Resident Manager of the West Linn mill (holding corner of the flag); J. M. GUYNES, chairman, payroll allotment division, Clackamas County War Bond Sales Committee; R. MORRIS HOLMAN, chairman of the committee; and A. R. LINDSLEY.

## Eliminate Cross-Hauling Of Wood Pulp

● The pulp and paper branch, WPB, announced August 4th that as result of a survey of a large segment of the pulp and paper industry, steps have been taken to effect a transportation saving during August of an estimated 100,000 car-miles through elimination of a cross-hauling of wood pulp.

This saving, the branch said, will result directly from the interchange of Eastern and Western book and bond grade bleached sulphite pulp. In the allocation of pulp for August under general preference order M-93, it was found possible to divert shipments to prevent the cross-hauling of approximately 2,500 tons of this grade of pulp in each direction across the country.

The branch estimated that the diversion will result in a saving of 100,000 car-miles this month in book and bond grade shipments alone. Surveys are being made to determine the interchangeability of other grades.

## Harris Vacations At Newport

● J. A. Harris, paper mill superintendent, Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, West Linn, Oregon, spent his vacation at Newport, early in August, accompanied by Mrs. Harris and daughter.

## Pacific Mills Makes Changes In Official Personnel

● In line with a progressive, long-term policy to extend Canadian control over its operations, Pacific Mills, Ltd., for many years a leading factor in British Columbia's pulp and paper industry, effected important changes in director and official personnel at its annual meeting in Vancouver.

Under the new set-up Eric Hamber, long a prominent figure in the industrial and commercial life of the province and a former lieutenant-governor, replaces F. N. Youngman of Portland, Ore., on the board of directors.

Louis Bloch retires as chairman of the board and Albert Bankus and Mr. Youngman retire as vice-presidents.

A. B. Martin continues as president of the company, with John A. Young vice-president and treasurer, at the Vancouver office, with H. C. Pim as vice-president and J. H. Lawson continuing as secretary.

Pacific Mills retains its close association with the parent company, Crown Zellerbach Corporation, whose head offices are at San Francisco, but the election of Mr. Hamber as a director is designed to give Pacific Mills, which operates only in British Columbia with plants at Ocean Falls and Vancouver, a greater degree of local autonomy.

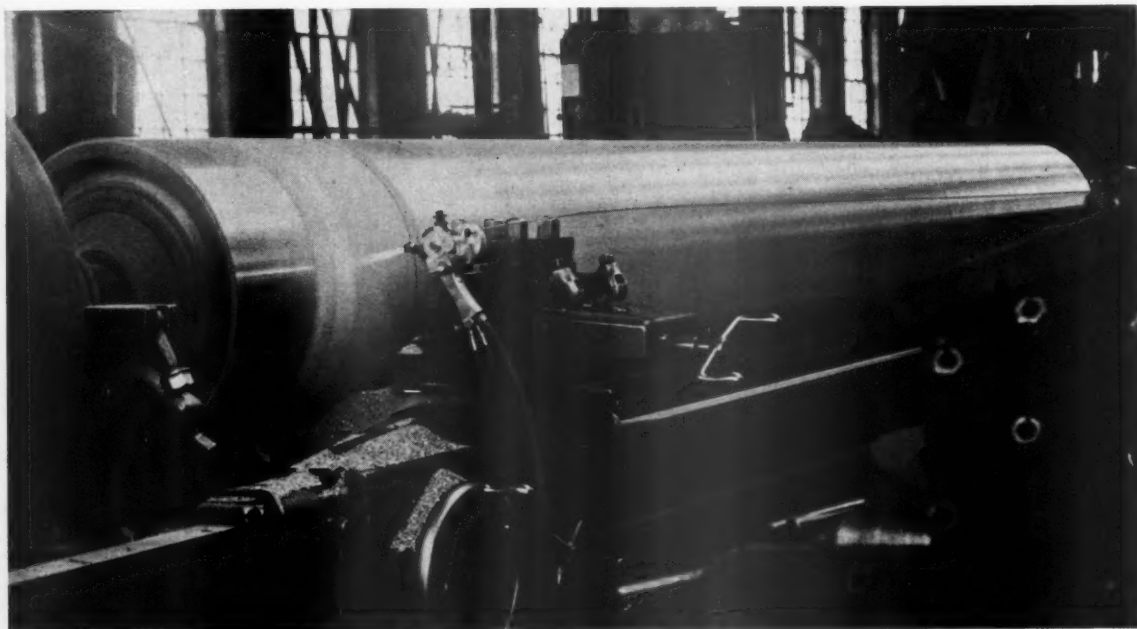
In addition to increasing production

of newsprint, kraft and other paper, pulp and a wide variety of paper specialties, Pacific Mills is playing an important part in Canada's war effort by producing about 12,000,000 feet of spruce annually for the airplane factories. With Powell River Company, the other big west coast paper producer, Pacific Mills shares the output of about 75 per cent of all the Sitka spruce being shipped for aircraft construction in B. C.

According to the company's annual statement, Pacific Mills contributed \$1,219,584 to consolidated earnings during the year ended April 30, 1942, compared with \$847,313 in the previous year.

The Crown Zellerbach report shows that \$346,553 or 28 per cent of the \$1,219,584 realized from the Canadian subsidiaries, less a Canadian withholding tax of \$51,983, was received in the form of dividends, the balance being reinvested by those companies in properties and additional working capital. In the previous year 56 per cent was received by the parent company in dividends.

The Canadian companies, Pacific Mills and its wholly owned subsidiary, Hudson Paper Company, were responsible for 11 per cent of Crown Zellerbach Corporation consolidated profit, the \$1,219,584 representing Pacific Mills earnings after deduction of the minority 7 per cent interest.



**BREAST ROLL REPAIRED BY METAL SPRAYING.** During the Winter of 1940 the fourdrinier frame of the Hawley Pulp & Paper Company's No. 4 paper machine broke, and one end of the breast roll fell 6 feet to the concrete floor of the wire pit. Where it hit the concrete the roll was flattened. A new roll was ordered immediately but when it was learned that delivery could not be made for 90 days, efforts were made to repair the damage.

The first attempt was to drive the roll smooth by working through a hole bored in the opposite side. This was unsuccessful. Next, a piece of bronze was welded onto the roll with the thought in mind that it could be dressed smooth. This, too, did not work, so it was decided to try metal spraying.

The job was taken over by the Adams Flywheel Welding Shop of Portland and a 13-inch strip of bronze was sprayed on the flat part of the roll to a thickness of approximately  $\frac{3}{8}$ -inch. This required 30 pounds of bronze.

After the breast roll was reconditioned by metal spraying it was put back into operation on No. 4, following a shutdown of 4 days.

It has been in continuous operation ever since and, according to Dick Bittner, assistant master mechanic, has worked perfectly. This breast roll is 20 feet long and 24 inches in diameter and weighs about 5 tons.

## Canadian Technical Section Reports Substitution Ideas

THE Technical Section of the Canadian Pulp and Paper Association is endeavoring to provide its members with useful ideas for substituting plentiful materials for those that are scarce. In May a circular letter was sent to all Canadian mills by Douglas Jones, secretary-engineer of the Technical Section acting for the Engineering Committee, in which the mills were asked for their ideas on substitution. The resulting information was summarized and sent to members. The first

report is published below through the courtesy of the Technical Section.

The Technical Section also summarized the ideas for maintenance and substitution embodied in the article "Making More With Less," which appeared in the May Annual Review Number of PACIFIC PULP & PAPER INDUSTRY, and this summary was distributed among the members. The work is continuing and the Technical Section will issue

further summaries as the ideas are gathered.

Although the mills supplying the ideas are not identified in the following summary, those interested in further data on any of the ideas may write Mr. Douglas Jones, secretary-engineer, Technical Section, Canadian Pulp and Paper Association, 3420 University Street, Montreal, Quebec, and Mr. Jones will refer the inquiry to the proper individual for a reply.

### TECHNICAL SECTION—CANADIAN PULP & PAPER ASSOCIATION

Service	Critical Material	Substitute Material	Remarks
Acid proof cement	Glycerine	Penchlor cement	Penchlor acid proof cement as a substitute for litharge & glycerine in patching acid tower lining has given good results.
Adhesives	Sodium silicate	Starch	Entirely satisfactory after using for the past year.
Alum (Paper-makers')	Alum	Sulphuric acid	From 1940 to beginning of 1941 tried sulphuric acid in place of alum to control pitch trouble. Unsuccessful.
Batteries for flashlights	Manganese & zinc	Rechargeable wet type	Have tried for only 6 months. So far satisfactory.
Bearings	Balls & roller bearings	Ryertex	On Jordans and grinders—excellent results.
	do	Sleeve brgs.	In locations where oil will not be polluted by water—satisfactory for low speed shafting.
	do	Brass bushed & babbitted	ditto
	do	Ryertex	On cylinder moulds—Ryertex shapes on hand but not tried yet.
	Babbitt	Tin-free babbitt	Results not known, but expect it to have a large field of usefulness.
	do	(Durite)	Lead base, no tin; used in usual locations.
	do	Ryertex	Results satisfactory where water can be used.
	do	Ryertex	Grinder brgs. no sign of wear after 4 years. Shaft brg. for propeller pump in 2% sulphite, stock; thrust brg. for Jordan engine; no signs of wear after 9 months. Bottom calender brg. This is now giving good results but at first we experienced trouble with it heating; has been in service 6 months. Pulpwood grinders—very successful to date.
	do	Ryertex or iron metallic	Successful substitution on grinders, Jordans, beater, jack ladders, bark-ing drums and Trimbey mixers.
	do	Magnolia metal Harris metal	For ordinary duty bearings quite satisfactory. To be tried for bottom calender roll bearings.
do	Babbitt & bronze	Ryertex	Successfully used in following locations, bottom calender brg., brest, table and felt rolls; pocket grinder and Jordan thrust bearings. Ryertex has been used successfully for several years in a number of installations.
do	Bearing bronze	Tombasil	Tombasil bronze, copper 81.5%, zinc 13.7% and silicon 4.8%. Have tried on paper machine felt rolls, so far satisfactory after one month only.
do	Bronze & brass	Porous iron	No statement as to results.
	do	Silicon bronze	Result not known, but expect it to be satisfactory.
	do	Lignum-Vitae	Lignum vitae block installed on sulphite mill strong acid pump about 3 months ago; satisfactory to date.
	do	Ryertex	Ryertex bushing on order for spindles in hydraulic turbines.
Belting	Rubber	Leather	Results satisfactory in many locations where moisture and fumes not too great.
Belting V belts	do	Cotton rope	We are about to try cotton ropes in place of V-belts using the same sheaves.
Bird screens	Brass bar stock	Lithcoted mild steel	Successful substitution for quick change bars on Bird screens.



Service	Critical Material	Substitute Material	Remarks
Castings (Misc.)	Aluminum	Cast iron	For various small brackets; heavy but satisfactory.
	Bronze	Cast iron	Various locations—keep well painted with red oxide paint.
Cement	Glycerine	Penchlor	For acid tower linings Penchlor cement will be tried in place of litharge and glycerine cement.
Chipper knives	H. C. steel	(Conservation)	The life of our chipper knives is being prolonged by slotting the hole in the knife for the square head bolt so as to be able to get more adjustment.
Chlorine for slime prevention	Chlorine	Copper sulphate	Efficiency not as great as chlorine.
Conduit & conduit fittings	Copper, bronze & Everdur	Lead	Leaded conduit and conduit fittings are being used to replace copper, bronze and Everdur fittings. Results not fully known.
Core tips (metal)	Steel	—	Intend trying out a method of nailing a short piece of sheet metal to end of core to replace core tips.
Cylinder moulds	Bronze	Conservation	When cylinder mould spiders become unserviceable due to slots being corroded, spiders are turned and reslotted and mould rebuilt.
Deckers & filters	Bronze wire mesh	Old fourdrinier wires	Discarded fourdrinier wires are used on cylinder moulds for groundwood secondary deckers, wrapper stock deckers, wet machines, also on inclined save-alls and F. W. filters.
Deckle strips for suction boxes	Rubber	Micarta	These have been in use now about six months and at the time were last inspected showed no appreciable wear.
Diaphragms	do	Copper	Spring copper on control diaphragm has been satisfactory on steam valves. Probably would be O. K. on other controls.
Doctor blades	H. C. steel	Ryertex	Ryertex strip is on order to be used as a doctor blade for sweat dryers.
	Stainless steel	Swedish blue	For dryer doctors—too soon to judge.
		Masonite	One-quarter tempered Masonite board doctor blades used successfully in place of s.s. Vickery blades on press roll doctors.
	Blue swedish steel	Fibreboard	One-thirty-second-inch thick fibre used on shavings doctor of Cameron winder—life is seven times that of steel and does not score winder drum roll.
	Brass	Galv. iron	Used on G. W. Oliver deckers. The performance is generally satisfactory although the wear on the winding wire is probably greater. On sulphite Oliver deckers the performance has been satisfactory after more than 5 years with double the life of the brass blade.
Filler for newsprint	English china clay	Good grade of talc	Can substitute 30% English china clay, by talc. Higher percentages lead to operating difficulties.
Filters	Bronze	Conservation	Old fourdrinier wires are salvaged and used for covers on stock and water filters.
Hacksaw blades	H. C. steel	conservation	Hacksaw grinding attachment is now used to regrind the hacksaw blades that have become dull. This is giving good results and has cut down the number of blades used.
Head box flow eveners	Copper	Nickel plated iron	Unsatisfactory as nickel wore off 2½ months in service. No evidence of galvanic action.
Heads, attaching wooden for exp. finishing of new rolls	Steel rod	Nails	By means of a jig, wooden heads are nailed to cores, thus eliminating steel rods through core—still on trial; waiting reports from customers.
Hose, metallic	Metallic steam hose	Iron pipe	We are using ordinary iron pipe and elbows for the steam connections to the P. M. Calender stacks. Three elbows are used and these make a connection which is adequately flexible and tight.
Hose clamps	Metal hose clamps	Wire	We are investigating a tool described as the Cleveland hose clamp tool which substitutes a wire fastening in place of the usual metal hose clamp.
Hose, rubber	Rubber	Iron pipe	Wherever possible we are installing iron pipe headers with short hose lengths in place of long lengths of hose.
Lining boxes	Sheet copper or galv. iron	Masonite	Used successfully on boxes used for soap mixture for felt washing.
Linings for vats, save-all trays, stock spouts	Copper sheet	Tile, plywood & Masonite	Satisfactory.
	L. L. Y. pine	B. C. fir	B. C. fir used for lining stock spouts.
Linings for W. W. tanks	Rubber	Lithcote	Good after one year's operation.
Lining for C. I. Bertram h'dbox.	Rubber, copper, stainless steel		Successfully used.
Manila rope	Hemp	Light steel cable	Used in almost all locations suitable for manila rope. Stiffer and apt to score when material being handled is not adequately protected.
	Hemp	Wartime rope	Is being given a trial. Said to have 20% less breaking strain.
Packings	Rubber	Old deckle strips	Rubber deckle strips from the suction rolls which are originally ⅞" x

Service	Critical Material	Substitute Material	Remarks
			1 1/4", after they have served their purpose are replaced and trimmed to 7/8" x 7/8" and used to pack the glands on hydraulic accumulators, with good results.
do	Hemp	Asbestos	Used where heat resistance is required; results comparable with hemp packing.
do	Flax	Leather	Used where temperature is not excessive; results comparable with flax.
do		Kurlite & Eureka	Used for hot acid circulating pumps in sulphite mill. Only fair results.
Paint	Aluminum	Asphalt emulsion	For preserving steel instead of aluminum paint use asphalt emulsion with superior results except for color. Use Quigley AAA.
Paper machine	Bronze	Lithcoted mild steel	Used successfully on P. M. aprons, apron lips, pond plates and slices.
Pipe & pipe fittings	Copper, C. I. & rubber lined	Transite	Results satisfactory for most locations if corrosion is not too severe.
do	Rubber lined C. I. pipe	Lithcote & lead lining	Results satisfactory where corrosion is not too severe and wear is not too great. Lithcote will stand quite a lot of wear but not much rough use.
	A. R. bronze	M. S. fabricated fitting, Lithcote lined	Under consideration.
	Steel pipe	Transite	For fresh water to coolers in sulphite mill. Experience limited but indications are that transite pipe is a good substitute for steel or C. I. within size limit.
	Copper	Woodstave & transite	Larger lines used woodstave, for 10" and under use transite—good satisfaction.
	Stainless steel	Lead	For cold acid and blowpit drains—satisfactory.
		Cast iron	For digester blow lines after blow valve; satisfactory with test holes in heavy cast iron lines.
	Copper	Asphalt lining	Iron pipe lined with high M. P. asphalt to prevent slime growth in W. W. lines; so far promising.
	Lead	Wood	Wooden dutchmen soaked in melted paraffine wax to replace lead dutchmen in stock and W. W. lines; so far very good results.
	Bronze or rubber lining	Lithcote lined C. I.	Used successfully on pipe and pump inserts for concrete and tile tanks, and in place of rubber lined fittings for stock and white water.
	Copper or galv. iron	Concrete asbestos	Used successfully on stock, white water and fresh water piping.
Piping	Steel pipe	Transite	For 3 years we have used transite pipe only for all new stock and white water piping, and for replacing all iron pipe. Transite is very satisfactory—no slime accumulation, lighter, costs less, readily cut by lathe or saw.
Pump		Conservation	Pump shrouds and wearing plates have been successfully covered with lead to prevent corrosion.
Rosin size stabilizer	Montan wax	Candelilla	Two per cent Candelilla wax will replace 1% Montan wax satisfactorily as a stabilizer.
Rotary screen plates	Copper & Monel	Nickel plating	Copper screen plates which had worn to .070" perf. were nickel plated reducing perfs. to .065". Unsatisfactory. Nickel wore off resulting in screens going back to .070" in the time equivalent to 1/5 of normal life.
	Monel	Copper	For screen plates—shorter life.
Rubber hose	Rubber	Ordinary pipe	By extending water and air piping, rubber hose lengths are reduced to minimum lengths.
Salvage by repair	Steel shafts	Metco spray	Pump shafts, scored slitter shafts, worn core shafts built up with Metco metal spray gun. Perfectly O. K. when carefully and correctly applied.
Screen plates—flat	Bronze	Conservation	All used flat screen plates are returned to manufacturer for re-rolling, and re-cutting.
Seals	Rubber	Rubber belting	Satisfactory use of 2-ply commercial rubber belting in place of pure rubber strips on Trimbey mixers for seals.
Sidings for buildings	Corr. galv. iron	Masonite	The Masonite must be protected with varnish or paint on a permanent job.
Solder	Tin	Tinless solder	Ninety-eight per cent lead, 2% silver, solder. Has higher melting point and is more difficult to use but with proper technique is entirely satisfactory.
Splines	Galv. iron	Masonite	Masonite splines, 3/16" presswood board, 3/4" to 1" wide, used successfully in place of galv. iron splines in end joints of continuous wood stave pipe.
Steel stacks	Steel sheet	Asbestos board	Paper mill economizer stacks and boiler house gas stacks. Asbestos board is very satisfactory but subject to fracture in certain applications.
Stencil & stamp pad ink	Glycerine	Emulsion(?)	Emulsion in place of glycerine for stamp pad ink with fair results.

Service	Critical Material	Substitute Material	Remarks
		Methyl cellulose	For stencil and stamp pad ink. This substitute is methyl cellulose, 4000 centipoises grade, which can be obtained from the Dow Chemical Co., Midland, Mich., U. S. A. Our method of preparing the ink is as follows: 103 grams methyl violet and 26 grams methylene blue are dissolved in 3 litres of hot water (208° F.). When dye is dissolved add 5 litres of cold water. Twenty grams of methyl cellulose (methocel) (viscosity type 4000 cps.) are agitated in 500 cc.'s of cold water for 15 minutes in order to obtain thorough wetting and dispersion. 500 cc.'s of cold water are added and the dissolving action completed by cooling and stirring. This solution (1000 cc.'s) is then added to the ink solution previously prepared.
Structural steel	Steel	Wooden structures McItyre wood connectors	No direct experience.
Sulphite mill	A. R. bronze	Cansiloy	We hung a number of discs of Cansiloy in a hot acid testing line. After one month found decrease in weight and evidence of pitting. Too soon to state if satisfactory substitute.
Table roll baffles	Sheet copper	Lithcote	Lithcote covering in place of sheet copper covering or paint. A heavy coating of Lithcote is essential and care must be taken in handling to avoid sharp blows, as coating is somewhat brittle.
Tank construction	Steel plate	Masonite	Used 1/4" tempered Masonite over joist construction in place of steel plate for cylindrical chip storage tank, 30 ft. dia. x 30 ft. high, straight roof 15 ft.
Tires for industrial trucks	Rubber	Conv. belt	Wheels built up of laminated conveyor belts or paper fibre; to be tried out shortly.
	Rubber	Friction brd. (red fibre)	Discs of red fibre were placed on a wheel hub well supported at sides. Wheel has run satisfactorily for three weeks—more are being made up.
Tires for industrial trucks	Rubber	Rawhide	Laminated rawhide or leather to be tried shortly.
		Maple	Wheel made of 8 hard maple segments with inside dia. grooved to suit existing steel rims. On outside 5" wide x 1/4" steel tire was shrunk on and whole riveted together with steel rivets.
		Built up steel tire	Tire was made of 5" wide x 1/4" rim with steel side plates of sufficient inside dia. to keep the O. D. of wheel 15". The construction was all welded to the existing truck rim. These are all poor substitutes for rubber due to lack of resiliency and shock absorption.
	Rubber	Old leather or canvas belting	Layers of belting cut to size are bolted together between two flanges to form the tire. Showed no wear after 3 weeks—too soon as yet to judge.
Tools—machine shop	Tool steel	Carbide tips	Results are good allowing higher cutting speeds.
Tubing	Copper & brass	"Saran" tubing	"Saran" tubing 1/4" dia. to 3/4" dia. used for water and air on control instruments.
Wearing strips for cable conv.	Spring steel	Hardwood	Under consideration.
Winding wires	Monel	Silica bronze	Winding wires for cylinder moulds—shorter life.
Welding	Various metals	Conservation	Extensive use of welding and brazing is used to salvage short pieces of pipe, worn shafting, pump impellers and housings, valves, small pieces of scrap plate. Silver brazing is used to reclaim small tools such as drills, reamers and cutters, etc.

## Pest Resistant Treatment for Paper

● The Glycerine Producers Association reports that,

"Many attempts have been made to treat paper and similar paper packaging products to render them resistant to destructive pests. A possible solution is suggested by a procedure developed by C. H. Hillen and patented in Australia (Australian Pat. 113,158). According to this patent, sheets of paper or cardboard are coated with a solution consisting of:

Formalin	5 per cent
Glycerine	5 per cent
Ammonium hydroxide	2 per cent
Casein	5 per cent
Water	83 per cent

"In the process, several sheets of paper are put together, and in between is placed one sheet coated with the above

solution to which some blue coloring matter has been added. The resultant laminated sheet is then coated on both sides with a somewhat similar solution consisting of:

Formalin	10 per cent
Glycerine	2 per cent
Boric acid	1 per cent
Sulfuric acid	1 per cent
Water	86 per cent

"The paper products so treated may be manufactured into packing boxes, bags, wrappings and similar packaging products."

## Keller At Officers' Training School

● Roy Keller, formerly in the office of Crown Willamette Paper Company, Division Crown Zellerbach Corporation, Camas, Washington, is now attending officers training school at Camp Roberts, California.

## Art Zimmerman Takes a Rest

● Arthur Zimmerman, general manager, Pacific Paperboard Company, Longview, Washington, vacationed the first two weeks of August with Mrs. Zimmerman at Orcas Island, Washington, where they did some salmon fishing.

## Gus Ostenson Vacations In San Juans

● Gus Ostenson, paper mill superintendent, Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, Camas, Washington, vacationed with Mrs. Ostenson, son and daughter during the first two weeks of August, at



## One Hundred and Forty-Three Receive Service Pins at Camas

"HERE in America we are free to celebrate anniversaries and tonight we are gathered to celebrate anniversaries of employment," said Vic Gault, master of ceremonies, as he opened the service pin award dinner at Camas, Washington, on July 23rd. Mr. Gault, personnel manager for the large Camas mill of the Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, announced that 143 men and women would receive service pins for from five to thirty years service.

After introducing the guests Mr. Gault called upon Frank N. Youngman, vice president, saying that it was his job to sell the products made at Camas. A very large proportion of the men and women at Camas hold service pins, Mr. Youngman said. Five year pins are worn by 618 persons; 10 year pins by 361; 15 year pins by 250; 20 year pins by 134; 25 year pins by 33; 30 year pins by 18; 35 year pins by 7 and the same number hold 40 year pins. A total of 1428 employees of the Camas plant wear service pins, a splendid record of achievement, Mr. Youngman said.

He told how the Crown Willamette mill machine shops in the Portland area are helping to break the machine tool bottleneck. The corporation offered the use of its machine tools without profit to aid the war program. Subcontracts were secured and now all three mills in the Portland area have machine shops filled 100% with war work except for the necessary mill repair jobs. The quality of the work being turned out, Mr. Youngman said, was equivalent to regular production shops according to the prime contractors.

As the organization's contribution to the war effort increases, Mr. Youngman

told the group, all will become prouder of their service pins.

### Mr. Heron's Talk

● Mr. A. R. Heron, director of public and industrial relations for Crown Zellerbach Corporation and Rayonier Incorporated, was the next speaker introduced by Mr. Gault.

"The relationship between war machine shop work and the service pin anniversaries is very close," Mr. Heron pointed out. Studies by prime contractors had revealed that the personnel in the shops had worked together for many years and under the same supervisors. These facts helped the prime contractors to decide to rely heavily on the Camas shop. They felt the men could be depended upon.

Mr. Heron then took his listeners back over the years, recalling political events and economic conditions at the time each of the 5, 10, 15, 20, 25 and 30-year groups had begun work at the Camas mill. The 10 year group was an unusual one. These 17 employees began work in 1932, the low point of the depression, a time when very few people got new jobs anywhere. How could that happen, he asked. By spreading the work. This program resulted in more names being on the Camas mill payroll at the end of 1932 than at the beginning.

Camas was the outstanding industrial city in the country during the depression. Unemployment was not the severe problem it was elsewhere and an important reason was the willingness of the Camas employees to share the available work with their fellow men.

Twenty-five years ago five of the men receiving service pins tonight came to work at Camas. We were also at war

with no promise of victory. Organized labor nearly doubled its membership only to lose in the later depression. Problems then seemed insurmountable. What will the roll call of 25 years from now show of those who are here tonight, Mr. Heron asked.

Back in 1912 when the 30 year men started work at Camas Taft was President and then Woodrow Wilson came in. Business was afraid of him, yet today's business man often gives thanks for what he did. Industrial insurance, workmen's compensation was a queer idea then. In that year, Louis Bloch, now chairman of the Board of Crown Zellerbach, supported the proposed law before the Washington legislature, citing his own experience as a boy when an injury kept him from working for a time. Otto Hartwig, now with the corporation, fought for the compensation law in Oregon.

In the midst of war, Mr. Heron said, we pray that these service pin anniversaries will continue on despite future conditions that are unknown. We can't even visualize the difficult job we are facing today. But the work being done by the mill machine shops is a magnificent example of what can be accomplished when we buckle down to the job.

The Camas mill has run through all past crises. Never has there been a time when the mill and its organization was as well prepared as it is today. The organization is better knit into a closer understanding between men who plan and men who carry out the plans than ever before. We hope, he concluded, that these anniversaries mean we all gain in understanding each other and our common problems better.

In introducing Louis Bloch, chairman of the board of Crown Zellerbach Corporation, Mr. Gault remarked that some people thought they had too many bosses but that Br. Bloch who has been with the company 48 years had 18,000 bosses in the common and preferred stockholders. Mr. Bloch's job, he stated, is to keep them satisfied; to keep their money working so we can all keep on working.

Before awarding the service pins Mr. Bloch remarked that 48 years ago, when financial losses in his family forced him to give up his plans to study medicine and go to work, he thought he was unfortunate. But this adversity turned out to be a blessing for it had brought him into the Crown Willamette organization.

The spirit of the men and women in the organization, their knowledge of the objectives and their will to win, gave him confidence in the future, Mr. Bloch concluded.

The service pins awarded to the eleven men in the Army and the Navy were presented by Mr. Bloch to their relatives, who had been invited to attend the dinner.

The following service pins were awarded to employees of the Camas mill, Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, on July 23rd.

### Thirty Year Pins

Adolph Paris and Lee V. Shannon.



ADOLPH PARIS receives his 30-Year Pin from LOUIS BLOCH, Chairman of the Board, Crown Zellerbach Corporation.

### Twenty-Five Year Pins

Alvie Burns, Tom Carras, Sidney W. Coumans, Edward H. Karnath, Alfred P. Young.

### Twenty Year Pins

Loran E. Burgess, Katie Cooper, Everade F. Gray, Charles W. Hoxsie, Herman H. Hunter, Axel W. Johnson, Elmer Clide Kocker, Jesse S. Morgan, Raymond B. McCoy, Adolph H. Nyberg, C. Glen Ramsey, Vern Ramsey, Walter C. Ramsey, Lee D. Rice, Jefferson T. Richards, Charley M. Schwartz.

### Fifteen Year Pins

Frank L. Anderson, William H. Bancke, Ernest Everett Berg, Sam Clough, Arthur R. Dickson, Charles E. Dodge, Edward F. Evans, Hugh A. Gittings, Oliver B. Hanson, Joseph Edward Hartl, Reed R. Hunt, \*Alex C. Kershinar, Edward G. Kropp, W. Earl Lambert, Paul V. Millard, Pat Monaghan, John H. Ostenson, Ernest L. Paris, Genio Quilici, Arthur H. Repman, Warren W. Rich, Kenneth E. Rodd, Irwin Cheever Shotwell, John Frank Smalley, Bert Edgar Sullivan, Laura Marie Tidland, Herbert Simon Whetzel, Clare F. Wilkinson, Arthur T. Williams.

### Ten Year Pins

Alexander C. Conner, Charles F. Cunningham, Bruce W. Dobbs, Reinhold W. Hirsckorn, Chester W. Lambert, Dorsey E. Lowther, \*Robert J. Ludwig, James F. Maney, Gilbert H. Milder, Marguerite Morgan, Nickielous A. Mueller, Nellie T. Owens, Maude I. Pegg, Albert R. Priebe, Joseph D. Roberts, Basil Taylor, Percy James Wann.

### Five Year Pins

Robert E. Allen, Vesta B. Allen, Bruce B. Babcock, Calvin L. Baker, \*\*\*R. John Batzer, John H. Beck, Paul C. Bennett, Ethel A. Burling, Marie Chamberland, Clifford L. Cochran, Ted M. Cole, \*Fredrick W. Corell, Muriel C. Crosswell, Zora L. Cunningham, Henry W. Dassel, Lawrence Dungan Jr., Marguerite Ebaugh, \*Ralph Ferguson, Carl L. Gehman, Robert D. Griffith, Ethel M. Hagen, Harry G. Hall, Daniel E. Hallock, Harold O. Halvorson, \*\*\*Floyd H. Hammond, Howard F. Henning, Halbert O. Hinze, Thomas M. Hughes, Lloyd O. Hutchinson, Henry B. Jacobsen, Ernest C. Jensen, \*\*Julius B. Jermann, Marian K. Johnson, Ragnor S. Josephson, Mary E. Kestie, Richard E. Lawton, Kenneth E. Locke, Lloyd R. Lowther, Kenneth F. Ludwig, Leo S. Malek, Richard H. Mark, \*John S. Mears, Dale G. Merrifield, \*\*\*Robert LeRoy Miller, Glenn E. Mullin, Don McPherrin, John B. McQueen, Theo L. Neel, \*Wallace A. Newcomb, \*Rodney O. Parsons, Walter J. Perrault, Harvey E. Pfeifer, Maude L. Potter, James H. Reed, Willard J. Rowley, Max J. Schmid, Carl F. Schwanz, Orville T. Smith, Reynolds N. Soderlin, Harold E. Stenehjem, Solveig O. Stenehjem, Chauncey L. Storms, John L. Stuhr, Tom Tarnaris, Lavine Thorn, Fred H. Weakley, Lloyd M. Weible, William E. Wegner, Delbert F. Williamson, John E. Wilson, Franklin P. Winesett, Roy L. Wohlsein, Orrin S. Wright, Frank J. Ziegler.

\*Army

\*\*Air Corps

\*\*\*Navy

### New Coast

#### TAPPI Members

● Recently two British Columbia men became members of TAPPI. Wallace C. Heim, chemist with Pacific Mills, Ltd., Ocean Falls, B.C., a 1940 graduate of the University of British Columbia; and, G. H. Rudkin, chemist with the British Columbia Pulp & Paper Co., a 1933 graduate of the same university.

#### Must Not Charge Extra For Paper Cups

● Merchants and others selling beverages in paper cups or paper containers were warned August 2nd by the OPA to discontinue the practice of charging consumers a separate price for these cups if no charge was made for them during March.

Many complaints received by OPA indicate that some operators of drug store soda fountains and lunch rooms are violating the provisions of the General Maximum Price Regulation by charging one cent for each cup in addition to the price for the drink. Unless the charge for the paper cup was made in March, the merchant cannot add it now.

#### WPB Okays 18-lb. Mimeograph Paper

● In a technical amendment to Limitation Order L-120, which establishes manufacturing specifications for many types of paper, the Director General for Operations on August 5th added a weight classification to the specifications for chemical wood pulp mimeograph paper in order to meet requirements of the armed forces and Federal, State and municipal agencies.

Under the original order, this type of mimeograph paper was permitted to be manufactured only in substance weights 16 and 20. Later, it was found that an intermediate weight, substance weight 18, was in use generally by Federal, State and municipal agencies. In order to avoid forcing these agencies to turn to a heavier weight and thus increase the use of paper, the intermediate weight (18) has been added to the specifications by Amendment No. 1 to Schedule III (covering fine writing papers) of the order.

#### Prices of Boards and Boxes Set at October Levels

● Admitting that the voluntary price agreements made last October with producers of folding cartons, corrugated fibre sheets, corrugated fibre boxes, solid fibre sheets, solid fibre boxes, set-up boxes, pads, partitions and other paperboard products, had been ignored by some producers, the OPA on July 30th ordered the freezing of prices as of October, 1941. In explanation of the order it was stated that the General Maximum Price Regulation which adopted March prices as the basis, had proved unjust to those manufacturers who had cooperated since October under the voluntary agreements and had protected the non-cooperating producers. Hence the decision to return to the October price basis which most of the industry had been following anyway.

Excluded from this order are producers of liquid-tight containers, milk bottle caps, book matches and other commodities covered by Maximum Price Regulation No. 129.

### TAPPI to Feature Exhibits Of Paper War Products

● The Technical Association has announced that free exhibit space will be supplied any concern wishing to show new paper products that are helping to win the War or to take care of civilian needs through the substitution of paper for products formerly made of other materials. The exhibits will be displayed at the annual Fall Meeting of TAPPI to be held at the Hotel Statler, Boston, September 29th-October 1st. The display will be open to the public.

Any trade association or company wishing to exhibit or anyone having suggestions as to what should be exhibited is requested to write to R. G. Macdonald, secretary of the Technical Association of the Pulp & Paper Industry, 122 East 42nd St., New York City.

### Canadian Association Opens Vancouver Office

● Herbert McKenzie, formerly manager of Export Sales Company, representing Powell River Company and Pacific Mills, Ltd., in the Oriental export field, has taken over the management of the British Columbia branch of the Canadian Pulp & Paper Association with offices in the Standard Bank Building, Vancouver.

This is the first branch to be opened by the association and it is designed to bring about a closer co-relationship of pulp and paper activities on the west coast with those in the eastern part of the Dominion.

In the past the association has concerned itself primarily with the affairs of pulp and paper companies in Ontario, Quebec and the maritime provinces, and the British Columbia companies have been more or less independent. Significant of the new development was the recent visit to the Pacific coast of R. L. Weldon, national president of the association, who conferred with officials of all the west coast companies.



**HERBERT MCKENZIE**, Assistant Secretary in charge of new West Coast office Canadian Pulp & Paper Association.

## PASC Holds August Meeting

● The August meeting of Paper-makers and Associates of Southern California will be held Thursday evening, August 20th at the Clark Hotel in Los Angeles.

Two speakers are on the program arranged by Richard S. Buckley, secretary-treasurer of PASC. Dr. T. D. Beckwith of the University of

California at Los Angeles, will speak on "Deterioration of Paper"; and Alden C. Fensel, consultant of the California Taxpayers' Association, will talk on "Cost of Living Indexes."

All who are interested are invited to attend the dinner which begins at 6 p. m.

## Import Committee Reports On Developments

● A large number of cases have been initiated by importers of groundwood and other dutiable printing papers in which they claim that duty should be computed on the basis of the commercial value of the Canadian dollar, and not on the basis of the official rate of exchange. New cases according to Warren B. Bullock, manager of the Import Committee of the American Paper Industry, involve ten shipments of novel news, one of dutiable newsprint and one of side runs.

The British purchase tax, equivalent to what is known in the United States as a sales tax, has been increased to 66 2/3 per cent. The increased tax applies to converted paper products, however, and not to the raw material. The tax on certain goods formerly subject to 16 2/3 per

cent tax has been increased to 33 1/3 per cent. The 33 1/3 per cent tax applies to account and plain note books. The 66 2/3 per cent tax applies to such goods as diaries, calendars, greeting cards, paperie, paper napkins and towels, duplicating paper, letter heads, etc. This tax is added to the domestic prices for such merchandise, to fix the base on which ad valorem duties are computed.

A Presidential order will permit the duty free importation of emergency purchases of war material abroad, if such purchases are made directly for the War, or its subsidiaries. It would appear from the text of the order that this duty free privilege applies only to direct Government purchases and does not include any merchandise imported for the use of commercial corporations, even if eventually for the filling of war contracts. The order has already become effective.

## Textbook Sales Hold Up Well

● Interest in the textbooks upon the Manufacture of Pulp and Paper is keeping up well in wartime, reports R. S. Kellogg, secretary of the Joint Textbook Committee of the Paper Industry, of which R. S. Hatch, research director of the Weyerhaeuser Timber Company, is the Pacific Coast member.

During the first half of 1942 sales came to 311 volumes bringing the grand total to 35,459 since the publication of Volume I in February, 1921. The detailed figures supplied by the McGraw-Hill Book Company are as follows.

	1st 6 Mos. 1942	Total to date
Vol. I .....	36	5,004
Vol. II .....	46	4,203
Vol. III .....	169	10,702
Vol. IV .....	133	8,337
Vol. V .....	127	7,213
Total .....	511	35,459

The Joint Textbook Committee of the North American paper industry which sponsors these textbooks has been functioning for twenty-four years. The royalties from sales accrue to the Committee and the funds thus derived are devoted to the necessary time-to-time revisions of the texts and the promotion of education in the industry. It is a record of which the original contributors to the undertaking—nearly 300 firms and individuals—may well be proud, says Secretary Kellogg.



The Port Angeles Division of Rayonier Incorporated on July 25 was awarded the coveted War Savings Bond Minute Man flag, signifying that more than 90% of its employees had enrolled in the payroll deduction bond purchase program. The plant's labor-management War Bond committee reported that 92% of the regular employees were making regular allotments through the payroll deduction plan.

W. E. Breitenbach, resident manager, received the flag from Roy S. Jensen of Port Angeles, Clallam County War Savings Staff chairman, as some 50 employees, including several members of the plant committee, looked on. Also present was William D. Welsh of San Francisco, from executive offices of Rayonier Incorporated and Crown Zellerbach Corporation.

Resident Manager W. E. Breitenbach (left) by Roy S. Jensen (holding flag). Standing behind Jensen are several members of the labor-management War Bond committee: left to right, M. F. Randall, Joseph Ross, C. D. Earl, George Zimmer, J. E. Flora, W. T. Serase and H. A. Sprague, with W. J. Benson kneeling behind flag. Holding the Rayonier sign at the end are two members of the office staff, Miss Bonita Egloff (left) and Miss Phyllis McKnight. Committeeman Max Johnson shows up at distant rear between Breitenbach and Jensen. Committee members not in picture were W. J. Faulkner, W. A. Saari and S. W. Grimes.



# Paraffine Employee-Management Campaign Speeds Production

**I**F you were to see lines of people with red feathers sticking from their hats you would naturally wonder how the feathers came there. And when you saw these same people entering a high, sand bagged trench bristling with barbed wire your wonderment would be increased.

Actually such a scene would be neither in the Wild West nor on the battle grounds of Europe but in the Pabco plant of The Paraffine Cos., Inc., at Emeryville, California, where employees are earnestly working day by day to break every known plant production record in as short a time as possible. The red feathers in their hats are tokens that they have contributed production suggestions to the labor-management Victory Production Committee for consideration. The war-like trench explains its existence with a sign which urgently states: **PRODUCTION IS A FRONT LINE TRENCH—LET'S KEEP IT THAT WAY!**

## Production Suggestions Break Bottlenecks

● Although Pabco's own part in Donald Nelson's Victory Production Drive has been in actual operation since May 16, when the first General Production Committee composed of labor-management representatives broke ground on a concentrated program to increase production speed, amazing production gains have already been achieved, the greater part of which directly sprang from employee production suggestions. These suggestions have increased labor efficiency, stopped time wastage, helped conserve machinery, and eliminated much production and distribution red tape. One month produced 227 suggestions and 44 of these were placed in operation.

In one month's operation of the Pabco Victory Production campaign the following records have been accomplished:

A large Government order of paint was produced in 50% less than normal production time.

Shipping Department labor efficiency increased 12% over the average of the first four months of the year.

Changes and improvements in shift starting times and a program for employing women to replace men in certain jobs has been stepped-up by employee suggestions.

Available labor supply has been greatly increased as a result of employee suggestions which made possible quick, on-the-job inter-departmental and inter-union transfers without slowing down production.

Floor Covering Department production rate of vital Government orders was nearly doubled due to increased labor efficiency resulting from planning of supervisors who were directly aided by employee suggestions.

With these results in mind, the most encouraging factor of all is the statement of the labor-management Production Committee itself: "The program has just started."

All nine divisions of the Pabco plant contributed to the labor-management

representation on the Victory Production Committee which is the focal organizational head of the drive. As each "Red Feather" production suggestion passes from division sub-committees to the General Committee this group of experts—management, foremen, workers, passes on its worth by applying one standard of judgment: "Will this production suggestion increase our output?"

When employee suggestions are put into actual plant operation, the author is rewarded further with Pabco "V" buttons which include the highest award of all, a diamond "V" button for those who have had five production suggestions put into operation within the plant. In addition to the button awards, the regular plant award system of cash recognition for practicable production suggestions remains in effect. These days, however, it is noticeable that the cash incentive is proving of secondary importance in the minds of those turning in production suggestions. The small "red feather" recognition for suggestion contributions and the "V" button have taken over simply because the purpose behind production of today is bigger than private gain.

To encourage and inform employees of the most vital part of the drive—the enlistment of individual responsibility in seeing to it that each job is done in the best possible way—posters which have been developed by the General Victory Production Committee of the Paraffine Cos., Inc., have been placed throughout the plant. In addition to the posters which urge contribution of suggestions, pooling of transportation, conserving of rubber, there is one presentation in particular which catches the eye. Pictured marching between two khaki clad dough-boys is a third boy in white outline. Above is a sign: **HE MAY BE ONE OF OUR BOYS—LET'S GIVE HIM ALL WE'VE GOT!**

## All Production Is War Production

● Since each employee can make or break a small link in the complicated chain of national production efficiency, the Victory Production Committee has keyed its campaign throughout to the bringing home of this realization. Although the men and women in the Pabco plant are not making guns, airplanes or ships, they realize that without 1000

gallons of paint, shipyard workers would not be able to complete a Liberty ship on sailing schedule, or an Army cantonment contractor would lose precious time waiting for tons of roofing materials. And so on, ad infinitum through out the other company products of floor coverings, building materials and special items.

## Labor and Management in Shirt Sleeves

● The Pabco "Got A Feather In Your Hat?" suggestion campaign is not for union workers alone, or for management but for both. Each day in the plant production sub-committees are clearing the way for the General Production Committee to act. While problems of production are fresh in the mind of committeemen, sessions are held between shifts, at lunch hours or after work hours to study production problems, talk over employee suggestions, and initiate the plans for greater volume right at the production line itself.

## Bob Atkinson Joins Marines

● Robert "Bob" Atkinson, a veteran employee of Puget Sound Pulp & Timber Co., is leaving the mill to become a member of the United States Marines. Atkinson, who helped fit up the first two digesters of the original San Juan Pulp Company in 1926, has seen the plant grow to a ten digester plant in his sixteen years of service. As the fourth man hired by the company, he is the oldest employee in point of years of service, to join the armed services.

## Ashe Joins Navy

● Fitzhugh Ashe, order clerk, Western Waxed Paper Company, Division of Crown Zellerbach Corporation, Portland, Oregon, is the first man of the plant's office force to join the armed forces. He became affiliated with the United States Navy in August.

Mr. Ashe is said to be one of the best amateur golfers of Portland and was a member of the Western Waxed Paper Company golf team which won the 1941 inter-mill golf competition at the Camas Paper Festival at Camas, Washington.

## PRODUCTION IS A FRONT LINE TRENCH —LET'S KEEP IT THAT WAY!

The cover photograph shows the entrance to the plant of The Paraffine Companies, Inc., Emeryville, California. On shift and off shift the men and women of the big plant are reminded of the day by day task that confronts the entire nation.

Their own labor-management Victory Production Committee was responsible for this trench which is part of a campaign at Pabco to break all production records through cooperation of every employee in giving the best that is in him.

### TAPPI Monograph Available On "Saving Fourdrinier Wires"

● The Technical Association of the Pulp & Paper Industry has recently issued a monograph entitled "Saving Fourdrinier Wires."

It was prepared as an emergency contribution to the war effort to point out ways to get the most use from paper machine wires and in prolonging their life to reduce the industry's need for copper and tin, so urgently needed by the armed forces.

The 21-page monograph was prepared by J. E. Goodwillie whose services were loaned to the Technical Association by the Beloit Iron Works. Mr. Goodwillie immediately enlisted the guidance of a number of particularly competent paper-makers whose years of experience had taught them the technique of getting the most out of wires and keeping them mechanically fit for unusually long periods of time under severe service.

Having prepared his first draft, Mr. Goodwillie read it in detail to a group of well known papermakers at the TAPPI Superintendents joint convention at Syracuse, N. Y., in May. These men devoted nearly six hours to a careful consideration of the subject and it was felt by all concerned that a thorough and careful job had been done, so well in fact that it was further decided to include the report in the TAPPI Monograph Series, to follow the Association's fine monograph on industrial water.

As a further contribution to the paper industry copies of the Wire Monograph have been sent to all members of the Technical Association and were distributed to those who attended the annual meeting of the Superintendents Association, recently held in Grand Rapids, Mich.

It is now the objective of TAPPI to get a copy of Saving Fourdrinier Wires into the hands of every machine tender, operator and engineer who has occasion to handle fourdrinier wires—the men who change the wires and those who run the machines. Copies will therefore be sent on request to any company operating fourdriniers. (There will be no charge for this service, although voluntary contributions to cover cost will be acceptable. The cost to the Association of each monograph is about 15 cents.)

Requests for copies should be sent to R. G. Macdonald, secretary, Technical Association of the Pulp and Paper Industry, 122 East 42nd Street, New York, N. Y.

### Dan Robbins Passes Cigars

● The cigars were on Dan Robbins, draftsman for the Puget Sound Pulp and Timber Company, when he reported the arrival of Harry Miller Robbins II, born on July 21st at the Saint Luke's Hospital in Bellingham. The little fellow is the grandson of Mr. Harry M. Robbins, vice-president of the pulp company.

### Vic Gault Takes A Vacation

● V. C. Gault, personnel supervisor, Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, Camas, Washington, went on vacation the first two weeks of August with Mrs. Gault. One week was spent on the McKenzie River and the other at Cannon Beach.

### John Moravec Dies In Vancouver

● John Moravec, 88, a pioneer in the pulp and paper industry in British Columbia died at his home in Vancouver, B. C., June 23rd. Born in old Austria he entered the pulp and paper industry at an early age.

In 1895 Mr. Moravec left Austria and became associated with the then new pulp mill at Chatham, New Brunswick. From 1909 to 1919 he was technical manager for the Whelan Pulp & Paper Company at Woodfibre, B. C., predecessor of the British Columbia Pulp & Paper Co. In the latter year he retired but kept up his interest in the industry until his death.

He is survived by a daughter, Mary, of Vancouver; a son, Joseph, of Camas, Washington; a grand-daughter and a great grandson.

### Paper Beer Bottle Caps?

● A Los Angeles inventor claims to have perfected a new paper cap for beer, carbonated beverages, for food products requiring vacuum packing, for still liquors, alcoholic and non-alcoholic.

To substantiate his claim he exhibited a bottle of beer, a bottle of catsup and a glass of cheese, all capped with his paper cap. The beer was said to have been passed through a sterilizer at 146 degrees for more than an hour after the paper cap was applied and it was still good.

### Moorhead Appointed Powell River Engineer

● Harold Moorhead has been appointed resident engineer for Powell River Company at Powell River, B. C. He received his degree at the University of British Columbia in 1933, and for three years following graduation served with British Columbia Pulp & Paper Company at Port Alice. He went east to serve the following three years with the Quebec North Shore Paper Company, leaving that organization to join the engineering department of Ontario Paper Company at Thorold, Ont.



**HAROLD MOORHEAD** Resident Engineer, Powell River Company, Ltd.

### Ingenuity A-I-A

● "The Foxboro Recorder" circulated among the employees of the Foxboro Company of Foxboro, Mass., throughout the United States and Canada had this to say under the above heading:

"As one of the industrial magazines recently editorialized, 'There is no Priority on brains.' The May issue of Pacific Pulp and Paper Industry bears this out, with ample evidence that American inventiveness is as good as it ever was and equal to any emergency, even such as the shortage of many critical materials.

"The editors have gathered suggestions from actual mill reports, showing literally hundreds of ways in which material is being salvaged for re-use, equipment is being repaired or adapted, scrap metal and old parts are being welded into new units, and non-critical materials such as wood are taking the place of metal. There are, in fact, more than 20 pages of photographs and detailed suggestions as to ways in which mills can 'Make More with Less.' We believe every pulp and paper mill (and plants in other industries as well) might profitably study this very helpful section.

"Along with this orchid for the editors, we want to pass another to the men of the Hawley Pulp & Paper Company, of Oregon City, Oregon. They built a steam siren for their mill which will warn the entire community in case of alarm using nothing but materials from the scrap pile, and have generously provided working drawings so that any other mill can build one like it. No wonder they call it the Victory Siren."

The article referred to appeared in the May Annual Review Number and copies are still available at \$1 each.

### Taxes Reduce Soundview Six Months Earnings

● Consolidated net profit of the Soundview Pulp Company and its wholly owned subsidiary, Lyman Timber Co., amounted to \$145,186 for June after all charges, including depreciation, depletion and provision for federal taxes under the 1941 Revenue Act, was equal to 28 cents a share on 488,250 shares of common stock outstanding after regular preferred dividends. Net profit computed on the basis of proposed federal taxes recommended by the Ways & Means Committee would be \$92,686 for June after all charges, equivalent to 17 cents a share on the common after requirements on the preferred.

For the first six months of 1942 consolidated net profit totaled \$857,286 after all charges and income taxes at the present rate, equal to \$1.63 a share on the common. Computing the first six months' earnings on the proposed tax bill net profit after charges is reduced to \$546,269, equivalent to 99 cents a share on the common after preferred dividends.

Sales aggregated 16,374 tons of pulp in June, compared with 15,264 in May and 16,177 in June of 1941. Last month's figures bring total sales for the first half of this year to 97,530 tons as against 93,650 tons in the like 1941 period. Production last month aggregated 16,408 tons as against 15,962 tons the preceding month and 15,556 tons in June of 1941. The company produced 98,363 tons in the first half of 1942 compared with 93,149 tons in the corresponding period of last year.

● The Navy "E" for excellence in production now flies beneath Old Glory over the Electric Steel Foundry's busy plant in Portland. The award was made to the company and its employees on July 9th by Rear Admiral C. W. Fisher, and at the same time each employee received a gold "E" lapel insignia.

Long known throughout the pulp and paper industry for the outstanding quality of its stainless steel castings, the Electric Steel Foundry Company has turned its experience and facilities to the winning of the war.

The presentation of the Navy "E," made before a large crowd of employees and guests, was an inspiring affair. Complimenting the organization to Portland reporters before the ceremony, Admiral Fisher said, "Electric Steel Foundry has done a bang-up job in quality of work and in deliveries. Its cooperation with Navy needs has been excellent. The firm certainly is entitled to commendation. It is in the forefront in keeping up-to-date in the latest foundry practices. The firm was the first to use X-ray methods for the detection of flaws in castings. They're a fine crowd and they have an excellent reputation."

Later, as he awarded the Navy "E," Admiral Fisher addressed the employees and guests,

"I am here as the personal representative of the Secretary of the Navy, and I am proud indeed to be so chosen to do homage and honor to the men and women of this company for the work they have done and they are doing, and their appreciation of the national crises in which we find ourselves, and to bring to you a tangible token of that appreciation, the coveted Navy 'E' for excellence and efficiency. That means in navy parlance the highest praise that can be given, in two simple words, 'Well done.' I congratulate you.

"This company and the workers of this company, as well as the management, have been in the forefront of development and improvements of its products for a long time. That fact is well recognized and is now being used by this country and the Navy. Well as you have done, well as you are doing now, I call upon you with the utmost solemnity to do more, to do better, to do it today, tomorrow, next week, next month and next year, and as many years thereafter as necessary. Let no man deceive you. This war is not yet won. It is not going to be over next week, nor next month. The news is bad. Would to God I could bring you a different message. The situation is serious, and this nation is in the most serious position it has ever been in since we won our independence a hundred or more years ago. During that War of Independence Tom Payne wrote these words, which might have been written today:

"Tyranny, like hell, is not easily conquered, yet we have this consolation with us—that the harder the conflict, the more glorious the triumph."

"And there will be triumph, provided every one of the one hundred and thirty million men, women and children of this great nation realizes these facts, gird up their loins, put their shoulders to the wheel and do more and more. The Navy will demand more and more; the Army will demand more and more. Why? Because of the power and might of those forces of evil against which we and the twenty-eight United Nations are striving; and we know we shall win because we represent right against wrong; we represent

## Electric Steel Wins Navy "E"

good against evil. The days to come will be hard. None of us fully realizes how hard, but I beseech you to keep the high goal of victory in sight rather than looking upon the inconveniences, the discomforts, the bleeding footsteps and the tragedies that no war has ever been without.

"I repeat, this is a war of good against evil, and you and I and all of us are soldiers enlisted on the side of good; and I trust that that feeling and that thought deep in your hearts will inspire and support the work of your heads and your hearts and your hands that the nation so badly needs.

"Finally, with courage and determination let us all climb the long and rugged road to victory, humbly, earnestly, in consonance with that Great God of Good, that Divine power, to Whom really belong, in the magnificent words of the Old Testament, the greatness and the power and the glory, and the victory and the majesty of that world which we shall build."

Accepting the Navy "E" pennant from Admiral Fisher, C. F. Swigert, Jr., president of the Electric Steel Foundry Company, said, "Our part in the war effort has been to turn out as many castings and finished products as we could with the plant, the equipment and the floor space at our disposal. What we have accomplished is not the work of any one

man or any department but is the result of the individual effort and the teamwork of everyone in the plant. To a large extent this is the result of the excellent work of your shop committee over many years in its capable handling of minor misunderstandings and arguments that can hardly help but crop up among any group of men working so closely together.

"... We of ESCO gratefully accept the award of the Navy 'E.' The right to display the Navy 'E' has long been considered by those in the service as the highest recognition of special merit. For our part I don't believe we should consider it as a reward for past services. I think we should recognize it as a challenge to greater efforts. No matter what we have done in the past each of us knows we could do something more, and our country desperately needs the best that each can give."

The address of welcome to Admiral Fisher was made by acting mayor of Portland, William A. Bowes. Governor Charles A. Sprague of Oregon also addressed the assemblage. Austin F. Flegel, Jr., executive vice president of the Willamette Iron & Steel Works, served as master of ceremonies.

Following the presentation of the Navy "E" pennant and the lapel insignia a reception was held at the Town Club for Admiral and Mrs. Fisher.



Rear Admiral CHARLES W. FISHER pins a gold Navy "E" lapel button on MARGUERITE ROESCHLE, longest in point of service of all girl employees of the Electric Steel Foundry Co. Other recipients of the lapel insignia at the ceremony July 9th were FRANK WARREN (left), Chairman of the Shop Committee; ARTHUR DEW, longest in point of service of all shop employees; and to C. F. SWIGERT, Jr., President of the company (right).



## WPB Announces Rough Pattern For Industry Concentration

● The War Production Board is working on plans for the concentration of civilian industry along patterns employed in England. There, "nucleus" plants were selected in each industry and other less efficient, less well located were ordered to combine their operations with the "nucleus" plants.

The WPB announced the purposes of the plan as (1), "a means of alleviating the strain placed on the civilian economy by the war effort"; and (2) "The war program has reached a stage in which the imposition of straight percentage cuts on all firms does not provide the most effective use of the nation's resources."

In Great Britain another purpose was served: namely, to provide badly needed manufacturing and warehouse space in existing industrial structures. There, it is reported, equipment has been taken from plants shut down and either installed in the "nucleus" plant or stored. Munitions making equipment was then installed or the buildings used for storage.

It will be noted that the WPB has already begun this program of concentration, starting with the stove making industry. This is an industry rather easily adapted to manufacturing war materials. Some industries such as pulp and paper are not so easily converted. Since we appear to have excess productive capacity in many lines and are even tearing down some new plants for which there are no raw materials to use the steel therein for something else, it is not likely that digesters would be taken out or a paper machine disassembled and the parts stored in bins, unless either the WPB or the owners later decide they are more valuable as scrap. Any mills that are shut down by the WPB's edict are more likely to lie undisturbed with nothing but their machine shops operating. Following is the WPB's carefully worded announcement of the concentration of industry plan:

"Chairman Donald M. Nelson announced July 23rd that the War Production Board has approved the principle of concentration of industry as a means of alleviating the strain placed on the civilian economy by the war effort. In approving this principle, the Board also approved certain broad policies governing the way in which concentration will be made effective.

"Heretofore, Mr. Nelson pointed out, the necessary limitation of output of civilian industries has been attained for the most part through orders which impose uniform reductions on all firms. These orders, which could be drafted and applied quickly, were necessary as a first step, have resulted in large savings of critical materials and have facilitated conversion to war production.

"The war program has now reached a stage, however, in which the imposition of straight percentage cuts on all firms does not provide for the most effective use of the nation's resources. Consequently, Mr. Nelson said, the Board has decided that wherever possible a policy of selective limitation be applied, with essential civilian production concentrated in certain plants and regions.

In adopting this policy, the Board held that there is a strong prima facie case for concentrating the production of civilian goods wherever one or more of the following conditions are found in a civilian industry:

"1. Some or all firms in the industry are needed for war production and can be converted to such production.

"2. Permitted civilian production is so restricted that economic operation of all firms in the industry is not possible.

"3. A significant part of the production is continuing in areas where there are bottlenecks in labor, transport, power or warehouse facilities.

"It is the belief of the Board that one or more of these conditions applies to a very large part of civilian industry, and it was agreed that a study should be made at once for the effect upon industry of the curtailment and limitation orders thus far issued.

"No hard-and-fast rules can be laid down, Mr. Nelson said, to govern the selection of 'nucleus plants'—i.e., plants which will be allowed to continue operation at or near capacity. In general, however, he said, the following criteria will guide WPB officials in such selections:

"1. As a rule, though not invariably, small plants will be kept in civilian production, and large plants, which are usually better equipped to handle war contracts, will be required to suspend civilian production.

"2. Civilian production should be suspended in areas where labor is urgently needed in war plants, and nucleus status should be given wherever possible to plants in areas where there is still a surplus of labor—as, for example, in New York City, and in many rural communities.

"3. Nucleus firms should be selected so that cross-hauling is eliminated wherever possible and the drain on transportation facilities is reduced.

"4. Production should be suspended or restricted in regions where the power supply is or is likely to become inadequate.

"5. As a general rule, nucleus plants should not be located in areas where warehouse accommodations are short.

"Mr. Nelson said the Board fully realizes that concentration of civilian production raises many difficult problems—

compensation to closed-down firms, maintenance of trade-marks, rearrangement of distributive channels, and so on. But while these are of great importance to the individual firms involved, he said, from the standpoint of war production they are secondary to the need for determining the degree of curtailment, concentrating production and converting non-nucleus firms to war work. In working out concentration plans, he said, the Board feels that these principles should be applied:

"1. Concentration plans should not foster post-war domination of an industry by one or a few companies. In other words, a plan which will make possible the re-entry of the largest number of firms into the industry after the war should be given preference, so long as it is consistent with efficient prosecution of the war.

"2. Wherever possible, concentration plans should be accompanied by standardization and simplification of the product.

"3. Concentration programs should be drafted for limited periods—with one year, probably, as a maximum—and should be flexible enough so that they can be revised if circumstances change.

"4. A concentration program for any industry should be coordinated with any program which the Office of Price Administration may work out for concentration of the distributive channels of that industry.

"5. Where compensation is provided for firms closed down, it should be paid by the firms which continue operations and should be limited to the duration of the concentration program. This would presumably include either an agency scheme, under which nucleus firms produce at cost for closed-down firms which retain their sales organization, or a pooling scheme which concentrates both production and distribution in the nucleus firms.

"Concentration of civilian production has been under study by the War Production Board for several months. On April 21 the Board instructed the Division of Civilian Supply and the Division of Industry Operations to conduct joint inquiries into the matter. Studies of the concentration of production in England and Germany have been made by these two groups and by the Labor Production Division; programs for concentration of production in a number of industries have been prepared, and an order has been issued concentrating production in the stove manufacturing industry.

"Active prosecution of the concentration program, together with the activities of the Smaller War Plants Corporation, should, Mr. Nelson said, render a good deal of assistance to a part of the industrial economy which thus far has been unable to find a place in the war effort."

### Brokaw Becomes Army Captain

● J. E. Brokaw, formerly in the controller's office of the Crown Zellerbach Corporation, has been commissioned a captain in the Army.

## Hawley Employees Awarded Bullseye Flag

● Hawley Pulp and Paper Company, Oregon City, Oregon, has been presented with the U. S. Treasury Department bullseye flag for achieving the goal of 10 per cent of the payroll regularly going into War Bonds. Ceremonies were held July 22nd in front of the Hawley mill's honor roll board near the time office. The mill employees and public attended the presentation, and the air raid siren was blown for a short blast heralding the opening of ceremonies.

Carl E. Braun, vice-president and mill manager, made the introductory remarks, pointing out that the Hawley mill was the first pulp and paper plant to go over the top on the payroll deduction plan, with all its employees subscribing.

"Later the United States treasury department put on a ten per cent total payroll deduction plan," Mr. Braun continued. "Here again, we led the way going over the top first of all the pulp and paper mills on the Pacific Coast, and as far as we are able to ascertain at this time, the first pulp and paper mill in the nation to achieve such a record. This is a remarkable achievement by the employees of this company. When the count was all made we discovered that we had not only subscribed the required ten per cent but were slightly over 13 per cent of our total payroll going to the purchase of war bonds, with every employee, participating from the oldest in service to the most recently hired.

Mr. Braun said the inspiration for such a record was found on the honor roll where the names of 106 men, former employees of the company, now in the armed service of the nation are posted. He concluded by saying, "These 106 men are doing the fighting for us, and we must see to it that they have the guns, ships, tanks, planes and equipment to prosecute this war to the finish. We must win this war and the peace that follows."

Ralph Guynes, chairman of the Oregon City chamber of commerce, presiding as master of ceremonies, paid tribute to the employees, saying they had always been way ahead of the bond committee. He mentioned that when the local committee was unable to get the ten per cent pins, the mill made their own tags, and that the practice of printing the bullseye insignia on the time cards, inaugurated at the Hawley mill, is being adopted by other plants throughout the nation. In concluding he said, "There was a broadcast the other night over the shortwaves that went to every part of the world. On this program a special tribute was paid to this mill, and our fighting men in the far lands, where the war is raging, heard it and were made proud of our mill employees."

Allan Rinehart, deputy administrator of the Oregon war bond staff, presented the bullseye flag to John H. Smith, president of Hawley Pulp and Paper Company, who affixed the flag to the halyard on the flagpole. Miss Suzanne Burce, Oregon Victory Girl, sang "The Star Spangled Banner" as the bullseye flag was hoisted to a position below the American flag.

Mr. Smith, in turn, made a surprise presentation of bullseye flags to repre-

sentatives of the two unions, Guy Jonas, vice president local 166, International Brotherhood of Paper Makers, and Fred Rodgers, vice president, local 68, International Brotherhood Pulp, Sulphite and Paper Mill workers union.

Smith said, "You have done something outstanding to lead the pulp and paper industry of the nation. I present these flags to your unions in the hope that they will be prominently displayed to inspire the perpetuation of the record established by the employees, members of your unions."

Lieutenant Colonel Alfred P. Kelley, Portland air base, represented the army at the ceremonies, expressing the appreciation of the men of the armed services for the support of the mill employees in furnishing implements of war.

"We have lost the first quarter of this war and we may lose the next quarter too. We let those buzzards get a seven year start on us. We were so interested in refrigerators, automobiles, and so forth that we failed to prepare for war," Kelley said.

Ensign Jack Sugg, of United States Navy, called attention to the number "13" on the company bulletin board, signifying the percentage of the payroll going to the purchase of war bonds. He said that was the luckiest number he had ever seen—it means the end of the era of too little and too late.

Frank Fergerson, millwright at the Hawley mill, stepped forward following the program and purchased a \$100 war bond from R. Morris Holman, Clackamas county war bond sale chairman.

### Morgenthau Wires Congratulations

● On July 29th J. H. Smith, president of the Hawley Pulp & Paper Company, received the following telegram from Henry Morgenthau, Jr., secretary of the treasury:

"I am very glad to learn that employees of the Hawley Pulp & Paper Company are participating in payroll savings plan with allotments for war bonds averaging 13 per cent of the gross payroll. You have achieved an excellent showing. Please thank and congratulate the workers for this fine record.

Henry Morgenthau, Jr.,  
Secretary of the Treasury."

### Berthiaume Visits Old Home in Michigan

● Visiting among his old-time friends and relatives in Michigan was the happy vacation experience of Arthur Berthiaume, night foreman of the Puget Sound Pulp and Timber Company. Leaving Bellingham on July 1st, Mr. Berthiaume travelled by rail to Bay City, and with that city as headquarters he spent three weeks among his boyhood surroundings.

### Enghouse Vacation At Seaside

● Clarence A. Enghouse, assistant to the resident manager, Crown Willamette Paper Company, Division of Crown Zellerbach Corporation, West Linn, Oregon, vacationed with Mrs. Enghouse and son Richard at the Seaside beaches the last two weeks of July.



**HAWLEY PULP & PAPER COMPANY** receives the Treasury's Bullseye Flag for 100% employee participation in the War Bond purchases through payroll deduction plan. 13% of the Hawley payroll is going into War Bonds.

Left to right, JOHN H. SMITH, President and CARL E. BRAUN, Vice President and Mill Manager of the Hawley Pulp & Paper Co.; Lieutenant Colonel ALFRED P. KELLEY, U. S. Army; SUZANNE BURCE, Oregon Victory Girl; Ensign JACK SUGG, U. S. Navy; CAROLE WORTH, Oregon Centennial Girl; and ALLAN RINEHART, Deputy Administrator of the Oregon War Bond organization.

## St. Helens Report Shows Gain

Indicative of how mounting federal-state taxes affect corporation earnings: St. Helens Pulp & Paper Co. in 1940 paid \$240,794 of such taxes in 1941 paid \$713,692. Net earnings prior to taxes rose 82½% but total of taxes virtually trebled.

While the company increased its before-taxes earning about \$540,000, it had remaining, after taxes, only \$67,593 more net income in 1941 than in 1940. Contrasted with \$414,058 net income in 1940, St. Helens Pulp & Paper last year earned \$481,651. Per share "net" of 1940 was \$2.07 and for 1941 was \$2.41. This was a new high record. In 1939 the company had earned \$310,405, equal to \$1.55 a share. Shares of \$10 par value outstanding are 199,934.

Company last year disbursed \$1.40 a share in dividends as against \$1.60 paid in 1940. The tax situation is said to have been partly responsible for this conservatism. In the current year the company has paid dividends of 20c and 40c (June 1), just as in the first half of 1941.

### Surplus Gets Boost

● All but a few hundred dollars of net earnings not distributed as dividends was passed into earned surplus. This account was lifted from \$1,658,972 to \$1,860,715, or in the sum of \$201,743.

In its conservatism, says the "Oregon Voter" in its analysis, the company not only wanted to be prepared as to taxes but manifestly paid heed to building up quick assets, including inventory of raw materials. Total of current assets as of Dec. 31, 1941, was \$1,948,279. This compared with \$1,231,941 at end of the preceding year, marking an increase of \$716,338. Cash and treasury notes of the tax series (\$550,610) totaled \$697,540 as against \$251,426 cash among assets at end of 1940. Inventory items were up from a total of \$677,853 to \$759,856 but the item of raw materials and supplies was up from \$474,596 to \$684,371.

### Working Capital Mounts

● In the ratio equation between current assets and liabilities, the necessity for making so much heavier provision for taxes was as upsetting as for corporations in general. Current liabilities Dec. 31 were \$980,861 compared with \$457,417 a year earlier. Provision for taxes boosted the total \$483,051, but accrued accounts and payroll also were greater items. Thus quick assets at end of 1941 equaled 1.98 times quick liabilities as against a 2.69 times proposition at end of 1940. Working capital, a more important figure, was boosted from \$774,524 to \$967,418.

Sales of the company in 1941 totaled \$4,576,303. Sales figures for the years preceding were not announced. Profit and loss statement for 1941, with 1940 figures insofar as possible set up for comparison, follows:

	1941	1940
Net sales.....	\$4,576,303	.....
Cost of goods.....	2,981,744	.....
Gross sales profit....	1,594,558	.....
Selling admin. exp....	424,334	.....
Operating profit.....	1,170,224	.....
Other income.....	25,119	.....
Corporate income.....	1,195,343	\$654,853
Prov. fed., state taxes	713,692	240,794
Net profit.....	481,651	414,058

Depreciation was shown as a deduction from corporate income in 1940, the amount being \$245,194. In the 1941 statement, depreciation was not separately listed but was included in general expenses.

### Assets \$4,841,000

Total assets of the company rose from \$4,116,760 to \$4,841,948, or by the sum of \$725,188. This gain was almost wholly attributable to the \$716,000 increase in current assets. Capital assets-plant and facilities after deduction of depreciation

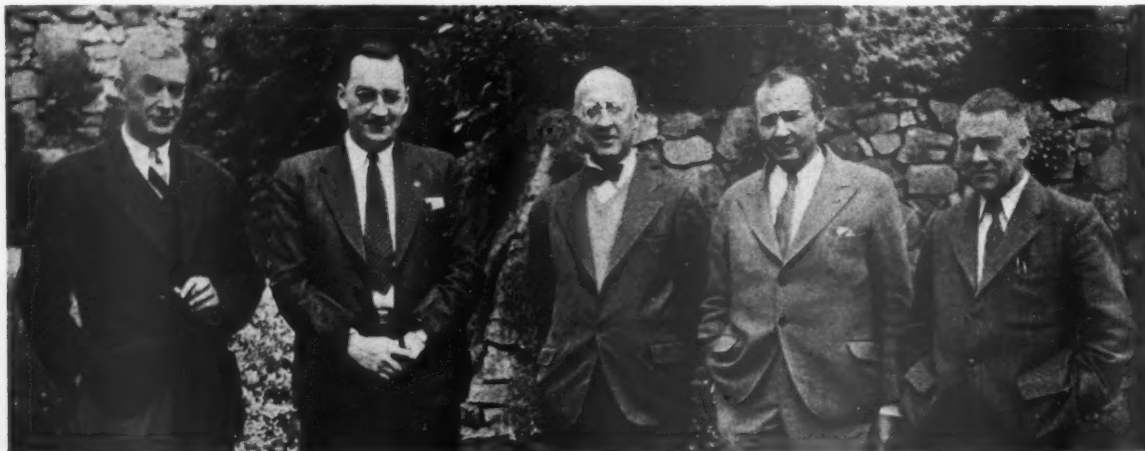
reserve—were down a few thousand dollars in book value.

Net worth of the company increased by the amount of the addition to earned surplus, already cited as \$201,743. It became \$3,861,086 compared with \$3,659,343. Book value of shares thus rose from \$18.30 to \$19.31.

Year-end balance sheets, 1941 and 1940, compare as follows:

ASSETS			
Current:	12/31/41	12/31/40	
Cash .....	\$ 146,930	\$ 251,426	
US Treas (Tax Notes) .....	550,610	.....	
Accounts rec. ....	490,883	302,661	
Inventories .....	759,856	677,853	
Total .....	\$1,948,279	\$1,231,941	
Life ins., value .....	77,186	69,935	
Invests., notes .....	28,878	.....	
Plant, equip., less depr of \$2,104,877 and \$1,913,316 .....	2,738,758	2,768,407	
Deferred assets .....	48,846	46,477	
Total assets .....	\$4,841,948	\$4,116,760	

LIABILITIES			
Current:			
Accounts pay. ....	\$ 176,247	\$ 141,927	
Accrued wages....	38,114	32,040	
Prov. for taxes....	766,500	283,449	
Total .....	980,861	457,416	
199,934 \$10 pref. shares .....	1,999,340	1,999,340	
Paid surplus .....	1,031	1,031	
Earned surplus .....	1,860,715	1,658,972	
Total liabilities....	\$4,841,948	\$4,116,760	



**VISITORS AT POWELL RIVER.** When R. L. WELDON, President of the Canadian Pulp & Paper Association and the Bathurst Power & Paper Co., Ltd., and A. E. CADMAN, Secretary of the association, visited the Pacific Coast recently, they made a tour of the Powell River Company's operations.

The visitors were photographed with a group of Powell River executives. Left to right, ROBIN BELL-IRVING, Vice President, and RUSSELL COOPER, General Superintendent of the Powell River Company; MR. CADMAN, MR. WELDON; and, D. A. EVANS, Resident Manager of the Powell River Company.





**DURING THE WAR**  
 ★  
***OUR MAIN EFFORT IS  
 URGENT WAR WORK***

**BUT YOUR ESSENTIAL NEEDS  
 ARE OUR SERIOUS CONCERN  
 FOR PULP AND PAPER ARE  
 NECESSARY TO VICTORY**



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 STAGE COUNTER-CURRENT PAPER STOCK  
 WASHERS • DECKERS • WET MACHINES •  
 INCLUDING HYDRAULIC WITH HIGH DENSITY  
 VACUUM WET END • THORNE BLEACHING  
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 OF "IMPROVED" EQUIPMENT IS ASSISTING  
 IN THE ECONOMICAL PRODUCTION OF  
 QUALITY PULP AND PAPERS



**IMPROVED PAPER MACHINERY CORPORATION**  
 NASHUA • NEW HAMPSHIRE

## Weyerhaeuser Holds First Aid Banquet at Longview

Fred Pontin, First Aid Supervisor, Crown Zellerbach Corp. and Rayonier Incorporated, speaks to 50 Weyerhaeuser employees who received Standard Red Cross First Aid Certificates. Emphasizes accident prevention value of first aid training as a major contribution toward winning the war.

THE Longview Mill, Pulp Division Weyerhaeuser Timber Company, Longview, Washington, held a first aid banquet July 15th. Fifty employees were presented standard Red Cross certificates. These men have successfully completed the standard ten-week, twenty-hour first aid course under Mrs. Mabel White, Red Cross instructor.

W. Norman Kelly, manager of the Longview mill, introduced the speaker of the evening, Fred Pontin, first aid supervisor, Crown Zellerbach Corporation and Rayonier Incorporated. Mr. Kelly also expressed the appreciation of the management to the men for having completed the first aid course. The company gave each of the certificate recipients a personal first aid kit. These were presented by George H. McGregor, superintendent.

E. J. Hinde, engineer and plant defense coordinator, officiated as master of ceremonies.

The students displayed their appreciation to Mrs. White by giving her an electric clock and war stamps, the presentation being made by Don Felthous, engineer.

An advance first aid class is already under way with an enrollment of 25 men.

The men receiving the first aid certificates are as follows: A. Sandquist, L. R. Lindsey, A. W. Arnold, G. H. Blisse, C. R. McCully, H. L. Peterson, H. A. Hauff, J. J. McNair, R. N. Hammond, G. R. Chambers, Donald Felthous, Preston Varney, R. H. Oswalt, Lyal Jones, Robert Cook, Don Wilson, Frank Schmoyer, J. Majiski, J. L. Bernard, Hugh Levell, J. S. Heigel, Svarre Hazelquist, Art Erickson, Harold Baulig, J. H. Pierce, E. J. Hinde, Earl Edmondson, M. H. Wilson, Leslie Anderson, Erwin Furlong, John McClees, N. Chicherin, H. E. Nelson, W. E. Little, M. Cassidy, F. M. Donnelly, Wm. Ely, C. F. Miller, J. S. Backman, R. G. Imeson, G. M. Kirkpatrick, R. F. Calligan, Bob Weed, V. Mauerman, O. W. Brown, E. E. Belangy, W. A. Christenson, Dave Wickland, W. F. Schakoht, P. A. Bruenn.

### Mr. Pontin's Talk

● I am particularly pleased to be present here this evening to say a few words to you on an occasion of this kind. I am pleased to have the pleasure and the privilege to congratulate and compliment you upon the completion of a first aid course. Personally, I think it is a very fine gesture on your part that you have given of your time to acquire the knowledge whereby you may be of assistance to your fellow human being; learned how to control arterial bleeding, the importance of dressing wounds, how to immobilize fractures, treatment of shock, render artificial respiration in required cases, and the proper

handling of a person that has to be handled prior to the transportation of that patient to a doctor. I say it is a fine gesture because the chances are that if you are injured, you are not going to be able to render first aid to yourself unless it happens to be some minor instance, so consequently you have taken the course to be of assistance to your fellow man.

### Convincing Skeptics

● I am fully aware of the fact that there are a large number of individuals yet who are prone to think that first aid work is just so much bunk, and it is very unfortunate that something tragic has to happen before they will sometimes realize that there is real merit to the work. I know of a number of instances where lives were lost and lives were saved, and the only difference being in the cases where the lives were saved was because someone was on hand who knew what to do, who had taken the trouble to learn something about first aid procedure. I mentioned a moment ago that something tragic has to happen sometimes before some folks realize the importance of first aid work.

Let me try to give you some idea of just what I mean; I am not going to mention any names or places, I have in mind an individual who had been approached a number of times to take a first aid course. He always gave the same answer that I have heard on a number of occasions, "I haven't got the time; I couldn't learn anything there anyhow."

However, there came a time later when this person with his wife and son about seven years old and a number of friends from the same community went out on a picnic at a lake. During the day they missed their little boy, who had wandered off, as youngsters have a habit of doing. They searched around briefly, and not finding the youngster, they started inquiring of persons who knew the boy, if they had seen him. One person recollected having seen the boy standing on the float over the water, a little while previously. This caused them to look in the water along side of the float.

Suddenly they saw the boy in about 8 feet of water at the bottom of the lake. One of the boys in a bathing suit dived and brought him out. Another individual started artificial respiration right away, and were fortunate enough to start the boy breathing.

The point that stands out to me, ladies and gentlemen, is that as far as his dad was concerned, the youngster could have died. It had been too much trouble for him to learn what to do, but there was someone there, someone who had taken the trouble to learn something about it, just as you people have, someone who did not think it was so much bunk, and because of that fact, the child was turned

over to his parents none the worse for his experience. I want to assure you it changed the viewpoint of that person; he is one of the best first aid men in the state today, but it took that experience to convince him.

Another case which I would like to dwell on just briefly happened in your own back yard, just outside of the city limits of Longview. A lady became involved in an automobile accident, through no fault of her own, caused by an individual coming from the opposite direction passing another car when he did not have sufficient clearance. Both cars crashed and were thrown into the ditch. Occupants of another car witnessed the accident, stopped, made a quick investigation as to injuries among the occupants of the car that caused the accident, and finding nothing serious, he hurried to the other car in which two ladies had been riding. He found that one of the ladies had a very severe cut on the side of her head which had severed the temporal artery. He immediately applied digital pressure, got her out of the car, carried the lady over to his own automobile, maintaining pressure on the artery below the wound, got someone to drive his car and brought her to the hospital in Longview. The doctor stated that were it not for the prompt action of this individual, the lady's life certainly would have been endangered.

I have mentioned these cases where these lives were saved, but I could also mention cases where lives were lost, and two of them just recently. One of them from the physical shock following the accident; the injuries were not serious, merely a simple fracture of the thigh, but they did not treat for shock because they did not know the dangers of shock. So, I say, ladies and gentlemen, keep up the good work, speak to your friends about it, defend it, give it a boost, and sometime, some place, you yourself, or some other person will be mighty pleased that you have given of your time to acquire some knowledge of first aid.

### First Aid As Accident Prevention

● I have mentioned the importance of a knowledge of first aid procedures, but important though it is, it is only secondary; prevention of the accident in the first place superceding it, because, of course, prevention is far better than any cure. So I would like to deal just briefly with the part the first aid plays in the prevention of accidents; it is, in my humble opinion, the very foundation in the prevention, or at least one of the greatest single contributing factors in the prevention of accidents.

If the analysis of the various agencies are correct, and one of these agencies is the Department of Labor and Industries in the state of Washington, after a



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That means everyone of us must do his part to "Roll out the drums." When drums arrive at your plant, make sure they are handled carefully. Empty the contents as soon as you can. Don't use drums for other material. Don't even rinse them. Be sure to replace the bungs and tighten securely. Then, keep those drums moving on a rush round trip—many round trips.

Do it today—and every day—for VICTORY.

**ROLL OUT THE  
DRUMS**  
—  
**HANDLE CAREFULLY—  
EMPTY AND RETURN  
PROMPTLY**

**GREAT WESTERN DIVISION • THE DOW CHEMICAL COMPANY**  
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thorough study, they cannot attribute more than about 20% of the accidents to faulty equipment, the other 80% then comes from what? Much as we hate to admit it, we have got to classify them as man failure, such as, taking a chance when it is not needed, indifference, false bravado, and sometimes the environment in the home contributes to some extent. I do not mean that it is always the fault of the individual that is injured, but if the accident is traced down, you will find it is someone's fault. First aid plays a very important part in this type of accident because a person trained in first aid becomes safety conscious.

Again, we have certain individuals who when approached about doing his work unsafely, will say, "Oh, I have been doing it that way for ten years and I have not been caught yet." Well, maybe he has, but there is always a first time. Recently I read of an employee in the East that had each working day for a number of years taken a short cut to his home, which compelled him to climb a six foot fence. One day he slipped and broke his back, and is now a cripple for the rest of his life. He had taken this short cut about 3000 times.

If first aid has a tendency to make a person a little more safety conscious, if it helps to prevent accidents, then certainly it is of double importance at the present time, when the crying need of our boys at the front is guns, tanks, ammunition, planes, and the ships to carry them. We don't often stop to realize how important accident prevention is in our industries, especially our national defense industries, where every man is an essential unit if we are going to guarantee production. If by a little effort on the part of everyone concerned we are successful in cutting accidents in half, it will go a long way in providing the weapons of war that are so vitally needed. Let me read to you an editorial of the Daily Olympian, published July 6, 1942:

#### Accident Prevention and Victory

● "President Roosevelt said in a recent letter to the secretary of the Department of Labor, that 'work accidents in 1940 caused an aggregate time loss of close to one and one-half billion man hours.'"

"According to a group which wears the handsome title of National Committee For the Conservation of Manpower in War Industries, there was an increase of 11.1 per cent in the number of employees engaged in war industries in 1941 over 1940. But there was a 29 per cent increase in the frequency of accidents and a 6.4 per cent increase in the fatality rate for the same period.

"It has been estimated that the nearly four billion man-hours lost by work accidents during the last two years was sufficient to build: 60 battleships, 500 destroyers, 600 submarines, 260,000 light tanks, 150,000 trainer planes, 100,000 freighter planes, 40,000 medium bombers, or 20,000 heavy bombers.

"It is easy to see that safety or accident prevention is absolutely necessary to winning ultimate and final victory. Safety means the safeguarding of our home front because hours lost from accident causes are not just unused; but lost. Such hours cannot be replaced with man-hours drawn from the reservoir of the future with no irreparable damages to the security of our nation as a whole.

"Our supply of safety engineers, practically, is exhausted. The need for safety specialists is mounting rapidly—20,000 war industry executives and key supervisory employees were enrolled in short intensive training courses in safety engineering during 1941.

"Safety is the backbone of our production line and should be taken seriously and practiced constantly by all, young and old.

"Accident prevention offers a splendid opportunity for young engineers or administrative personnel to serve their country and engage in a fast-growing profession.

"It is practically impossible to find an experienced safety engineer today that isn't employed in a needed capacity at a decent and fair salary.

"We need to safeguard our home front from the hidden enemies within our own boundaries to be able to strike more forcefully on the outside."

Ladies and gentlemen, from the standpoint of national defense alone and loyalty to our country, we should promote

safety by every means. We cannot afford to leave unchallenged the fact that the United States has the worst accident record of any country in the world.

In my experience with men in industry, it has been worth noticing how many of the most flagrant violators of safety made a complete reversal when they were involved in an accident. Many of them, that is, those who lived through the accident, became models of accident prevention. Although it is regrettable that many of us have to have first-hand experience with accidents before we become aware of hazards and the guarding against them, it is a noteworthy fact that the value of safety and first aid is clearly seen afterwards by most of us.

At the present time there are a large number of people like yourselves who have availed themselves of the opportunity to take a first aid course, and if only one of the individuals that have learned some knowledge of first aid is successful in saving someone's life, or is successful in preventing the amputation of someone's limb, then to me that one case alone is worth all the effort and the time and money that has been put into this work, because to me, you cannot measure human life and limb in effort expended and money spent.

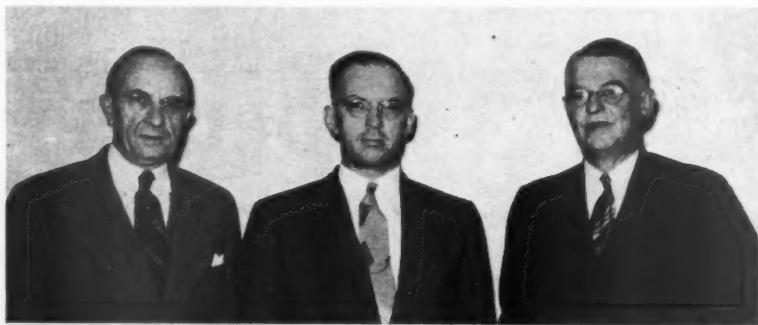
If any one of you here tonight had a youngster that had been involved in an accident, and you were told that there is no possible chance of saving that youngster's life by your local doctor, after being told that someone told you that there was a specialist in the East, if he were brought here might save his life, but it would cost \$10,000 to bring him here. Would you hesitate? Not for one moment you wouldn't; you would do everything possible to bring him here, if you did not have the money, you would make every effort to get it, and you would obligate yourselves for the rest of your life in order to obtain it on the merest, slimmest chance of saving that youngster's life. Yet it is surprising how many people that would make the sacrifice would not trouble to give of their time to take a first aid course whereby they might be able to accomplish the equivalent.

In closing let me again congratulate all of you. Also, I would like to congratulate the management of the Pulp Division Weyerhaeuser Timber Company for their part in acknowledging your efforts. I thank you, Mr. Chairman, for the invitation to be here this evening.

#### Bulletin Issued On Brammer Consistency Control

● A new bulletin on the Brammer Consistency Control has just been issued by Paper & Industrial Appliances, Inc., 122 East 42nd St., New York City. The principles upon which the Brammer operates, its design and construction are all described.

The Brammer consistency controller operates upon the principle that stock flowing through a trough or sluice assumes a natural slope, the angle of this slope depending upon the viscosity of the stock, the higher the viscosity the steeper the slope. Hence, a measurement of the drop in stock levels between two points in the trough is a measure of consistency of the stock flowing through it. Control is achieved through the Foxboro model 30 Stabilog controller controlling a Stabiflo diluting water valve.



B. W. CLARK, Vice President in Charge of Sales, Westinghouse Electric & Mfg. Co., East Pittsburgh, and President of the Westinghouse Electric Supply Co., visited Pacific Coast industries early in August and expressed his amazement at the region's industrial growth.

"Westinghouse is increasing its stake in Pacific Coast industry," said Mr. Clark, through the expenditure of a large sum in the expansion of our plant at Emeryville, California, to accelerate production for the war program and to enlarge our western manufacturing, service and repair facilities. The Westinghouse organization, while devoted to war production, is doing its best to keep the wheels of essential civilian industries moving at the same time."

Mr. Clark (right) was photographed while in Seattle with CHARLES A. DOS-TALL, Pacific Coast District Sales Manager (left), whose headquarters are in San Francisco; and, K. L. HOWE (center), Seattle Area Sales Manager.

# Forty Year's Progress in Pulp Stones and Burrs

by D. E. DUPUIS\*

## Introduction

THE following is merely the story of the development of pulpstones and burrs, during the past 40 years, as the writer has seen it. It does not claim completeness or scientific accuracy.

My first acquaintance with pulpstones and burrs took place a little over 40 years ago when I started to work in a little mill in New York state. This mill had but two 2-pocket type grinders using 2-foot wood. The small sand stones were sharpened with a diamond-point burr and dulled by means of a brick which was fastened to the end of a stick. The grade of pulp made in those days was indeed fairly crude. The stock was free and chunky and was usually difficult to run on a wet machine let alone a paper machine.

As stated by Brown, the object in grinding pulp is to approximate mechanically as nearly as possible, what is done by the chemical process, that is to free the fiber in the wood from its cementing bond, lignin, and in so doing to damage it as little as possible. The progress in development of pulpstones and burrs has been responsible to a large extent, not only for the marked increase in production but also for the definite improvement in pulp quality during recent years.

In the year 1900 approximately 586,000 tons of groundwood were produced. By 1930 production of this type of pulp had grown to 2,283,130 tons.

## Part 1 — Pulpstones

● Sandstones. The trend in sandstones has been the continual demand for a better grade by the pulp makers, and the necessity of supplying the larger size stones for the large modern grinders of today.

Between 1900-1904, it is safe to say that the size of stone in most common use was 54-inch diameter and 27-inch face to grind 24-inch wood. Production per stone was in the neighborhood of 6 to 7 tons per day and the power supplied was usually by water wheels, approximately 350 to 450-h.p. per stone.

After twenty years the trend was toward large magazine and continuous type grinders using 4-foot wood and

toward operation at much higher grinding pressure than formerly. In less than twenty years the standard size of grinder stones has increased to 54-inch face with a diameter varying from 54 to 67 inches. The power applied to this size of stone is about 1400 h.p. per stone or nearly double that previously used on equal width of grinder. Therefore the pulpstone producer has been called upon not only to supply a stone of more than twice the size but also of a quality to withstand nearly double the power applied, at the same time producing pulp of the desired grade.

On account of the difficulty of finding beds of sandstone sufficiently free from fractures and other defects, the cost of producing natural stones increases very rapidly with increase in size.

Natural sandstones are quarried in Virginia, Ohio, and Washington, U. S. A.; to a small extent in the Canadian provinces of New Brunswick and British Columbia, and in the Newcastle District, England. It is also understood that a small number of stones were received from Japan for Pacific Coast mills.

Two of the better known quarries are those of the Smallwood Stone Company, located at Empire, Ohio, and Opekiska, W. Va., producing the well known brands of stones which are named after their quarry locations.

Stones are quarried from the huge sandstone ledges by both mining methods and the open type quarry procedure. The sandstone is removed from the ledges in large square blocks known as patterns. These so-called block patterns are then divided into smaller ones of the proper size for pulpstones of the desired dimensions.

Pulpstones are subjected to meticulous inspection by the producer at the quarry, and many pulp manufacturers have gone so far as to send their operators to the quarries in order to make their own inspection and final stone selection.

When removed from the quarry beds, the stones are soft and contain amounts of moisture, commonly called quarry sap. This liquid usually runs out of the stones in a week, but the stones will still be soft when this has stopped. By continual exposure to air, the stone will slowly harden or season, a process somewhat like the setting of concrete. This "seasoning" should take place in a well ventilated and even temperature covered room, which protects the stones from the elements. The general consensus of opinion seems to be that a stone should be allowed to season for about one year before being put into service, otherwise the stone will commence to scale, and pieces break off after the outside seasoned shell is worn away.

It is also known that freezing a freshly quarried stone is extremely detrimental. Therefore, quarry operations and stone shipments are pretty well confined to the warm summer months.

The two qualities of a grindstone which most strongly influence its production of pulp are the grit, consisting largely of small quartz grains of varying size; and the matrix or binder, usually of a soft material which cements the grains

together. For a newsprint grade stone the binder will run from about 15-20%. If the matrix is too hard the stone will glaze. If it is too soft the stone will crumble and wear away too fast. A soft stone requires more frequent dressing and a deeper pattern while a hard stone is more difficult to dress. However, once a pattern is imprinted on a hard stone it endures much longer and can again be freshened by periodic light application of the burr.

The process of removing the wood fibres must be one of tearing and rubbing. The grit of the stone separates the fibre from the pulpwood stick; therefore, the size and shape of these particles affect the production of the largest amount of good fibre, with the smallest waste in coarse and very fine materials. It has been agreed that the most satisfactory grit is one subangular in form, i. e., with the corners of the particles rounded off. Generally speaking, a stone of fine grit produces a fine-fibred pulp, and a coarse grit produces a coarse and shivvy pulp.

It has been stated that the ideal pulpstone would wear away at such a rate that as a grit became dulled it would become detached from the matrix. Such a stone would be self-sharpening and if the grit size and shape were correctly chosen would require no dressing.

It is felt that the wide variation in natural sandstone quality has been largely responsible for the retarded progress and development of better efficiency and economy in mechanical pulp manufacture for a good number of years. This lack of progress in the groundwood mills has been reflected in the paper machine operation as well.

## Artificial Stones

● In the late twenties pulp manufacturers were demanding a pulpstone that would withstand the higher stresses occurring in the larger type magazine grind-



D. E. DUPUIS, Discusses Development of Pulp Stones and Burrs.

\*Manager, Ste. Anne Paper Company, Ltd., Beaulieu, Quebec. Mr. Dupuis was born in the town of Easton, Washington County, New York, May 19, 1883, and was educated at the high school in Schuylerville, N. Y.

At a very early age he entered the field of papermaking, starting to work for the American Wood Board Company at Schuylerville, remaining for a number of years. In 1911 he came to the Pacific Coast as foreman in the Crown Willamette Paper Company mill at Camas, Washington. When the company's new mill at Ocean Falls, B. C., was completed in 1917 he was transferred there.

From Ocean Falls he moved to Iroquois Falls, Ontario, to become associated with the Abitibi Power & Paper Company. Later he returned to the West Coast as Production Superintendent for the Hawley Pulp & Paper Company at Oregon City.

Eastern Canada called for the second time and Mr. Dupuis became Paper Mill Superintendent for the Anglo-Canadian Pulp & Paper Company at Limoulu, Quebec. Later he returned to the Hawley mill as General Superintendent. From the latter position he moved to Lebanon, Oregon, as Manager of the Crown Willamette Paper Co., Division of Crown Zellerbach Corp., mill. When the Ste. Anne mill reopened in 1937 he became Manager.

ers in the modern groundwood mill and also a stone which would give an increased rate of production and lower unit costs.

Two large abrasive manufacturers took on this task and produced an artificial type of pulpstone. It must be admitted, however, that the industry took to these stones rather slowly; first, due to their higher initial cost and, secondly, the general reluctance on the part of the older pulp makers to change over to a new tool. However, during the past few years, particularly in the large magazine and continuous type grinders now operating at increased grinding pressure, the change over to the artificial type of stone has been almost unanimous.

As stated by Roberts, with the advent of the artificial stone, a definite step forward in the art of making groundwood

has been taken, by virtue of the facility of manufacture of a stone to predetermined specifications; reproducible at will resulting in uniform pulp over extended periods of continuous operation.

Artificial stones are manufactured under constant control and the most rigid process inspection. Uniformity of structure is therefore an inherent characteristic. They are not subject to the serious individual variations of grade and cutting qualities that are inherent in stones secured from varying sources and scattered geographical locations.

In the most popular type of artificial stone "Crystalon" (silicon carbide) abrasive is the cutting material and is bonded with special clays and vitrified at high temperatures in modern kilns. The tensile and compression strength of the abrasive material in this make of stone is sev-

eral times that of an average sandstone. In addition, this stone has been properly designed to amply take care of the expansion and contraction resulting from heating and cooking in its regular use. The range of particle size is smaller, there being no large grits and less of the very fine grit than in a natural stone.

This make of stone is fabricated in two types each consisting of an assembly of segments anchored securely to a reinforced concrete core, and so staggered that the spaces between them cannot produce slivers. These spaces are filled with a special compound forming a joint which is not affected by constant immersion in hot pulp or acids, and having a resistance to wear closely approximating that of the stone's surface.

The second abrasive manufacturer, again tending to adhere to the long standing theory that abrasive crystal must not be too sharp angled or sawtoothed but predominantly wide angled with comparatively blunt cutting edges, selected a specially processed "Aloxite" Brand Aluminum Oxide-grain having these highly desirable wide angled and straight cutting edges.

Because pulp stones are subjected to enormous stresses, temperature fluctuations, moisture conditions, etc., the abrasive grains are bonded together with a vitrified clay or special characteristic peculiar to this type of stone.

The material used for cementing the segments together in the "Aloxite" pulp stone compensates for thermal expansion, thus minimizing the possibility of stone breakage from temperature changes. As in the case of the "Crystalon" abrasive stone, the joints wear down at the same rate as the abrasive.

From the use of artificial stones mills have been insured of a uniform steady rate of production without expensive shut downs occasioned by breakage or frequent stone replacements. Further advantages may be cited as follows:

(1) **No Seasoning Required.** Ball states that since artificial pulp stones are vitrified at an intense heat, they are not subject to atmosphere conditions or internal changes and consequently require no seasoning or drying out periods.

(2) **High Average Surface Speed.** The discarding diameter of the 62-inch stone is about 55 inches. Therefore, the mean diameter and mean surface speed is higher than with a sandstone. Also, there is no apparent production loss due to decreased surface speed because the rate of wear is very low. This low wearing rate makes it possible to keep the finger bars close to the surface, preventing excessive loss from escaping shims and resulting in a greater yield per cord of wood.

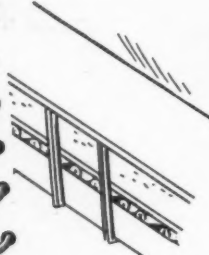
(3) **Long Burring Cycle.** The development of modern abrasives permits the selection of a grit which is harder than quartz and so reduces the wear on the stone and increases the time between sharpenings. The long interval between burrings and the resultant slow stone wear consequently considerably reduces the quantity of grit which gets into the stock system at any one time. This represents a marked saving on such paper machine equipment as wires, felts; abrasive effect on calendar rolls. This factor becomes of paramount importance when considered in the light that it is reported that 85 per cent of the usable part of every pulpstone is taken off in sharpening.

The long burring cycle also makes for more uniform pulp quality and when

FIELD NOTES

## CONVEYORS NEED "HATS"

*because they don't sun-tan*



Exposing conveyor belts to direct sunlight day after day is a sure way to increase the deterioration rate of the rubber cover. Breakdowns have been frequently traced to this hazard.

It is important therefore, that conveyors have some sort of a roof or cover over them to keep out the sun's rays. Longer life can be expected, which is a mighty important production factor today.

This same general precaution should be taken with your hose or any other mechanical rubber goods. When hose is not in use, roll it and store it in a cool, dry place out of the sun's reach, away from boiler heat, and steam pipes.

**VICTORY before "VICTOR"**

"Victor" has long been Pioneer's top brand... the finest in conveyor belts and hose. The fine grades of crude rubber used in its manufacture, however, now must serve ships, planes and tanks almost exclusively. Meantime, skillful blending of age-resisting chemicals with allowable rubber enables Pioneer to continue producing high grade mechanical rubber goods to emergency specifications. PIONEER RUBBER MILLS, 353 Sacramento St., San Francisco, Calif.

# PIONEER

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burred, stones require but a light treatment holding waste to a minimum.

(4) **Long Life and Low Stone Cost.** Observations of stone wear have been reported as follows by A. L. Ball:

Artificial Stones—2.5 to as low as 0.5 cubic inches stone wear per ton pulp.

Natural Stones—6.7 to 19.0 cubic inches stone wear per ton pulp.

Finally, such stones are made from uniform grit, which can be chosen according to the grade of pulp desired; of homogeneous structure and an unlimited supply of this type of stone.

The choice of a stone is primarily dependent upon the type of pulp required and species of wood to be used to obtain it, and secondly upon the conditions of operations such as circumferential speed and total amount of power to be absorbed.

It is quite obvious that a coarse stone will not produce a slow stock and maintain it with the facility of a fine stone, and a fine gritted stone will not produce free stock without difficulty. It is therefore incontrovertible that pulps from high to low freeness can be made on a coarse stone but there is a limit to the freeness that can be obtained from a fine gritted stone.

## Part II — Burrs

● Stone sharpening on the early grinders was carried out by bush-hammering the face of the stone with a stone-mason's hammer. Some forty years ago the diamond-point burr was pretty much in general use. Sharpening devices have progressed during the years from these crude means to the present elaborate system of combinations of hardened steel burrs. Recently many long standing burring theories have been refuted by experiments with steel brushes as a means of "stone-cleaning" rather than "dressing." One mill in particular is using this method almost exclusively with considerable success.

The trend in burring has been definitely toward longer burring cycles and less severe application or treatment of the stone with the burr. The burring cycle commenced to be lengthened with the use of the artificial type of pulpstone as did the light application of the burr. Very light burr treatment and still longer burring cycle is now the conventional method employed as part of the current method of Thin-Grinding.

The first burr-holder had a long handle, held by one operator, while another pulled the device across the face of the stone by means of a rope. Next came the screw-driven hand-operated device still in use in some pocket grinders. This was later improved by the addition of an hydraulic cylinder, finally developing into the powerful and rigid device now used on the hydraulic magazine grinder.

With the mechanical and hydraulic-dressing devices, the depth of cut or degree of dressing is varied by the operator, who adjusts the burr-feed carriage. The sharpness of the stone, the freeness of the stock, and the production, all increase with the pressure at which the burr is pressed against the stone.

For a considerable number of years a hard-burned brick, mounted on the end of a hand-operated stick, was used for dulling, or what is called knocking back, the surface of grindstones that have been given too severe a treatment with one of the other sharpening devices.

In recent years the brick has given way to a fairly smooth burr which in some cases is still mounted on the end of

a stick, for small grinder application, but in most cases is used in the burr lathe similar to any other burr. This burr or roller has the effect of knocking off the high spots and smoothing up the stone's surface.

The trend has been toward more specific care in keeping the burr equipment mechanically fit in order to obtain maximum pulp quality. In this respect the lathe should be thoroughly rigid with no side or end lash, properly greased and freed so that the motion is even and unrestricted. The burr itself should be concentric on its mandrel, and the mandrel and bearing should be well fitted so that there will be no chatter of the burr in its travel.

The purpose of burr impression, according to a long standing general theory, is primarily to provide a part in the

stone by which the groundwood can leave it and, secondly, to expose the grit above the binding material by removing some of the latter, and at the same time, to form small channels in the stone surface. The fibre, after being ground off, remains in the grooves, protected from regrinding, until it is washed from the stone's surface by the pulp in the pit.

For dressing the surface of the grindstone there are four different types of burrs in use. They are: the thread burr, the straight burr, the diamond-point burr, and the spiral burr. Combinations and variations of these are also frequently used in successive treatments. The quality of pulp produced by each stone is affected by the combination adopted.

In most cases the tendency is to select burrs which are suited to producing a de-

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sired quality of pulp from a particular type of stone.

Kendall stated that coarse stones cut on the grit while fine stones cut on the burr marking. It is only necessary to pursue the summary of groundwood operations in different mills made by A. F. Meyer in order to see that a wide range of burrs are being used presumably to offset variations in the grit characteristics of different stones.

Broadly speaking, almost any type of pulp can be made from any burr, depending on how the burr is applied and how the stone is knocked back. On the other hand, stones with a coarse grit and soft matrix will not readily hold a fine pattern and so require a coarser burr.

For a number of years prominence was given to a patented process in which the combination marks of a coarse straight-cut burr and a fine-cut spiral burr are used.

### New Developments

● During the last two or three years considerable experimentation has been done and, as a result, a number of the mills using large magazine and continuous type grinders have changed over to the so-called Thin-Grinding method of groundwood manufacture.

This new method has proven so successful that it not only refutes a great number of long standing grinding and burring theories, but also prompts a critical examination of many long held ideas.

This development has considerably increased the burring cycle and also decreased the severity of burr treatment. In other words, only light burr application is used at the end of long intervals.

It would appear that in thick-grinding a somewhat coarse fiber is first produced, which is then considerably reground, whereas in thin-grinding a finer fibre is made which is much less reground, and the final effect is that a finer yet freer stock can be produced with less dissipation of power in friction and rehandling of stock.

In thick-grinding, stones were burred more frequently to keep stone temperature and line loads within predetermined limits. In other words, stones were often times merely burred to simply clean them or to prevent so-called jamming in the grinding area and magazine. Stones revolving in heavy pit consistence pulp consume a substantial amount of power, acting very much like a machine operated with the brake on. By going to lower stone submergence and lower pit consistence, the brake or stone drag has been released thus enabling the operation of duller stones and lower pit temperatures.

Considerable regrinding is also carried on when operating at high stone submergence and heavy pit consistence, i. e., varying amounts of pulp are carried up into the grinding zone and thus go through a process of regrinding. By this action the burr pattern and actual grit of the stone becomes "filled up" and thus impairs the cutting action of the stone and resulting in a substantial increase in temperature, power consumption and very often jamming of the stone. This condition resulted in unnecessary burring of stones which proved costly from a stone wear point of view and sacrificed pulp quality due to untimely interference with stone surfaces to reduce load and temperatures. The relocation of stone shower and the use of back and front showers, having high pressure shower water, comes in for considerable mention as a means of helping to eliminate the above condition and thus burring reduction.

Stones sharpened to operate at high stone submergence are much too sharp for low submergence operation. This is obviously due to less regrinding of fiber and less stock thus being carried around with the stone into the grinding area. Thus the operation of a duller stone enables a gain to be made in fibre length, strength, temperature and production at a lower pit freeness.

Following the theory that the grits do the cutting and that we sharpen for the purpose of exposing more grits, one mill has done considerable experimenting by allowing the light burr pattern to gradually and completely disappear from the stone. Ideal grinding conditions and stock quality are maintained by applying a steel brush to the stones both for the purpose of stone cleaning and exposing more grit from time to time. The successful operation of this method certainly refutes the long standing theories regarding pulp transport in the grooves of the burr pattern and also the many long held ideas concerning burr combinations, etc.

Another recent development is that of the Brecht patent on the sharpening pressure indicator. The value of this mechanism is to permit the stone sharpener to control the quality of his sharpening on artificial stones by having a gauge before him to show what pressure he has on the burr at a given time. The pressure used is predetermined for every quality of stone and quality of pulp desired therefrom. Several of these indicators have been installed in European mills with apparently gratifying results. However, due to current conditions it is impossible to import or secure additional data on this development at this time and Canadian and American instrument

companies have been asked to look into the development of such an apparatus for use in this country.

### Conclusion

● In conclusion the writer wishes to mention that many details have not been covered in the foregoing outline of this broad subject, due to the brevity of this article.

### Destruction of Waste Paper An Economic Calamity

● States the following editorial in the Daily Mill Stock Reporter for August 1st, urging that other uses for waste paper be developed to supplement the consumption by paper and board mills which cannot utilize the supply available today.

"Waste paper is being burned. It is being carted in sizable tonnage to city incinerators in New York, and probably in other cities, thrown into fiery furnaces and destroyed. Within a comparatively short period of a few months when the Government and paper board manufacturers were urging the nation's population to conserve and collect waste paper and thus "Help to Win the War With Waste Paper," we have come to a deplorable situation where there is such a glut of waste paper supply that dealers are compelled to burn or otherwise destroy it in order to dispose of it.

"This destruction of so essential and valuable a raw material is a downright pity. It is, in fact, an economic calamity. Why can't something be done about it? What is the matter with our wartime economic bureaus and personnel? Why can't the technicians in our national Government at Washington or elsewhere in the country devise some means whereby such an important raw material can be utilized in the war effort? Why isn't waste paper used to conserve our natural forests for lumber and ships, so urgently required for the prosecution of the war?

"Certainly there is something radically wrong behind the prevailing waste paper situation. Waste paper constitutes the one black spot on our economic war program thus far. With the rest of the world, or most surely nearly all of it, literally crying for pulp and paper, we find ourselves with such a tremendous surplus of waste paper that burning or other destruction of it has become an absolute necessity in order to get rid of it.

"There seems no question the Government has not given, and is not now giving, the consideration to waste paper which this essential raw material so richly deserves. There is at present all of a round million tons of waste paper, sorted, baled and ready to be moved directly into consumption. Board and paper mills have in storage close to half a million tons, according to latest Census Bureau figures, and waste paper packers all over the United States aggregately must have at least another half million tons accumulated in their warehouses which they are eager to dispose of and for which in recent months there has been scarcely any market whatever.

"With all the technical brains that have been recruited by the wartime Government in Washington, why can't some avenue of necessary use of this important raw material be found? How about waste paper being pressed into briquettes and





## "Increase the proportion of fibrous materials other than wood pulp"

MANY paper manufacturers are having trouble in complying with Government requirements for increased production of paper and board from a curtailed allocation of wood pulp. They are obliged to increase the proportion of reclaimed paper and other low grade raw stock in their beaters. They can produce more sheetage only by reducing base weights. Both alternatives add to the difficulties of machine operation. Hamilton Felts materially reduce these difficulties. By removing more water at the wet end of paper machines, Hamilton

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chemically treated for fuel to take the place of coal or oil, such as was attempted some years ago, or why can't it be utilized for the extraction of chemicals, or carbon-black or something of the sort? It is difficult to believe that this nation's scientific minds cannot fathom some method of utilizing this valuable raw material for helping the war effort instead of permitting waste paper to rot or be destroyed such as is now the case.

"The waste paper situation is an important problem for the Federal War Bureaus to solve. Waste paper is a valuable raw material which should be conserved and consumed, and not destroyed."

### New List of Pulp Testers Announced

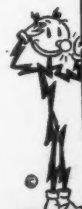
● An up-to-date list of pulp testers approved by the Certified Pulp Testers' Bureau, 122 East 42nd St., New York, has recently been issued. These are approved for weighing, sampling and testing wood pulp for moisture.

Of the 16 commercial laboratories approved three are on the Pacific Coast; Cellulose Products Laboratory (E. D. Rich, director), 754 Broadway, Tacoma; Abbot A. Hanks, Inc., 624 Sacramento St., San Francisco; and J. G. Priestley, Northwest Testing Laboratories, Second and James, Seattle.

The 19 approved pulp and paper mill laboratories include 9 Pacific Coast mills: H. W. Bialkowsky, Pulp Division Weyerhaeuser Timber Co., Everett, Wash.; William R. Barber and Fred A. Olmsted, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., Camas; N. W. Coster, Soundview Pulp Co., Everett; Clarence A. Enghouse, Crown Willamette Paper Co., Division of Crown Zellerbach Corp., West Linn, Ore.; Nelson Hartnagel, Fibreboard Products Inc., Port Angeles, Wash.; K. C. Logan, Pacific Mills, Ltd., Ocean Falls, B. C.; F. J. Weleber, Hawley Pulp & Paper Co., Oregon City, Ore.; and Edward P. Wood, Pulp Division Weyerhaeuser Timber Co., Longview, Wash.

The Certified Pulp Testers' Bureau is an organization established and supported by the American Paper & Pulp Association, the Association of American Wood Pulp Importers and the Technical Association of the Pulp & Paper Industry.

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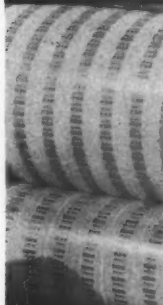
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